



MURTAGH'S PATIENT EDUCATION

6e





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PATIENT
EDUCATION

To my wife, Jill, and our children, Paul, Julie,
Caroline, Luke and Clare, for their understanding,
patience and support.



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6e

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Foreword

During my student days in the late 1940s the idea of educating patients about their illnesses was never discussed. From memory I am not aware that this omission was even noticed, although it may have been by those students who were wiser and more broadly educated than myself. When later I began medical practice as a solo general practitioner, I remember being surprised by the number of patients who had had major surgical procedures (as judged by their obvious scars) and who were quite ignorant of these procedures or what organs they no longer possessed. I found this lack of available information often interfered with the process of diagnosis due to incomplete, and often highly relevant, past medical history.

Another memory of my early years in practice was the number of times I was called out of bed because a child had a fever, only to be met on arrival at the home by a mildly ill child playing with a box of toys. This provided sufficient motivation to start teaching the family about the relative unimportance of a single sign in assessing illness severity, and the need to look at the whole child and not just the thermometer reading. Within two years, despite an increasing population of children in a new suburb, there were two observable results. First, the number of such requests for night and weekend calls had markedly reduced and, second, there was positive feedback from patients, such as 'Thank you for giving your time to explain things to me'. At the time many general practitioners were learning that this educational role was a legitimate and important part of being a competent general practitioner, which is not surprising since the word 'doctor' originally meant 'teacher'.

When I moved to academia, I then had a chance, together with my colleagues, to develop these ideas further and to formalise patient education as an essential part of patient management in the context of today's society. Patient education now forms a major part of a formal undergraduate teaching program embracing a number of consulting skills. In addition to the verbal communication skills of this program, we have developed a matching series of take-home pamphlets to reinforce these educational messages.

John Murtagh has taken up the concept of extending the consultation by writing patient hand-outs focusing on illnesses and their management. These have been published over many years in *Australian Family Physician*, and adopted for use by many general practitioners during the consultation. They have been gathered together and rewritten in this format for use by doctors and other health professionals as an aid to improving quality of care, reducing its costs and encouraging a greater input by patients in the management of their own illnesses. The unique objective of this publication is the author's wish to encourage doctors to use the material and to photocopy or even modify those hand-outs considered most useful. A logical extension of this information is to use it in an electronic format; *Patient Education* is also available on computer software.

Many doctors, especially younger doctors and medical students, have claimed that *Patient Education* has been a helpful form of doctor education and very useful in preparation for examinations, both undergraduate and for the fellowship of the Royal Australian College of General Practitioners.

In a society where informed consent is increasingly expected by the public, and the legal profession in particular, it is important for doctors to be aware of the need to provide patients and families with much more information than in the past. Professor Murtagh is to be congratulated for producing the important messages in non-technical language within the confines of a single page. This no doubt is a result of many years of experience in general practice, where he has learned the skills of effective communication.

EMERITUS PROFESSOR NEIL CARSON, MD, AO,
Past Chairman,
Department of Community Medicine and General Practice,
Monash University, Melbourne

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John Murtagh was a science master teaching chemistry, biology and physics in Victorian secondary schools when he was admitted to the first intake of the newly established Medical School at Monash University, graduating in 1966. Following a comprehensive postgraduate training program, which included surgical registrarship, he practised in partnership with his medical wife, Dr Jill Rosenblatt, for 10 years in the rural community of Neerim South, Victoria.

Dr Murtagh was appointed Senior Lecturer (part-time) in the Department of Community Medicine at Monash University and eventually returned to Melbourne as a full-time Senior Lecturer. He was appointed to a professorial chair in Community Medicine at Box Hill Hospital in 1988 and subsequently as chairman of the extended department and Emeritus Professor of General Practice in 1993 until retirement from this position in 2000. He now holds teaching positions as Professor in General Practice at Monash University, Adjunct Clinical Professor, University of Notre Dame and Professorial Fellow, University of Melbourne. He combines these positions with part-time general practice, including a special interest in musculoskeletal medicine. He achieved the Doctor of Medicine degree in 1988 for his thesis 'The management of back pain in general practice'.

Dr Murtagh was appointed Associate Medical Editor of *Australian Family Physician* in 1980 and Medical Editor in 1986, a position held until 1995. In 1995 he was awarded the Member of the Order of Australia for services to medicine, particularly in the areas of medical education, research and publishing.

Practice Tips, one of Dr Murtagh's numerous publications, was named as the British Medical Association's Best Primary Care Book Award in 2005. In the same year, he was named as one of the most influential people in general practice by the publication *Australian Doctor*. John Murtagh was awarded the inaugural David de Kretser medal from Monash University for his exceptional contribution to the Faculty of Medicine, Nursing and Health Sciences over a significant period of time. Members of the Royal Australian College of General Practitioners may know that he was bestowed the honour of the namesake of the College library.

Today John Murtagh continues to enjoy active participation with the diverse spectrum of general practitioners—whether they are students or experienced practitioners, rural- or urban-based, local or international medical graduates, clinicians or researchers. His vast experience with all of these groups has provided him with tremendous insights into their needs, which is reflected in the culminated experience and wisdom of John Murtagh's General Practice.

Preface

In modern medicine patient education has become a very important and expected method of patient care. People are more interested than ever before in the cause and management of their problems, and for this reason access to information in an easy-to-follow presentation is very beneficial. Furthermore, patients need and deserve the best possible access to information about their health. The material presented in this book is not intended to be used as an alternative to the verbal explanations given by the doctor during the consultation but as complementary information to be taken home. Experience has shown that better understanding of a problem or potential health problem leads to better cooperation and compliance with treatment.

The author has produced patient education information to fit onto one sheet, which can be handed to the patient or person seeking health information. Medical practitioners often refer to this information as 'doctor education' as well as 'patient education'. Such practitioners are invited to use this information for a variety of purposes, such as a basis for their own patient education or for computer information programs. These sheets should have considerable value in undergraduate courses for doctors, nurses and other health professionals.

The catalyst for the initial production of this material came from two sources. The Royal Australian College of General Practitioners, through its official publication *Australian Family Physician* (AFP), encouraged the author to write patient education material as a service to general practitioners and their patients. The strategy was to present information on the most common problems presenting to general practitioners, each on a single A4 sheet and in the lay person's language. Patient education sheets have been a feature of monthly publications of AFP since 1979, and doctors have ordered them in vast quantities. This concept has also been promoted by *Australian Doctor*, which commissioned the author to write a series of patient education information in that popular publication. We have not simply featured illnesses, but have also included preventive advice and health promotion wherever possible.

The other impetus for this project came from the members of the Monash University Department of Community Medicine and General Practice, who realised the importance of this material for the education of medical students. Apart from providing valuable learning material for the students, it gave them the basis for illness and preventive advice to patients during the consulting skills learning program.

Following a rather indifferent response to the initial production of material in AFP, it is interesting to now discover that since the launch of the first edition of *Patient Education* the use of this material is rising very rapidly. It is now a much requested inclusion in computer programs for doctors and is blossoming on the Internet. These trends reinforce the perceived value of this form of health education.

The author believes that the subject matter in this book covers common everyday problems encountered by doctors and hopes that the dissemination of this information will benefit both health-care providers and people who are interested in their health.

Acknowledgments

The author would like to thank the Publication Division of the Royal Australian College of General Practitioners for encouraging the concept of patient education and for their permission to reproduce much of the material that has appeared in *Australian Family Physician*. Also, my colleagues in the Department of Community Medicine, Monash University, have provided valuable assistance. Professor Neil Carson's far-reaching vision of general practice training includes the value of this educational medium. Thanks also to Dr Kerri Parnell and the Editor of *Australian Doctor* who have agreed to permit publication of selected patient education material that appeared in *Australian Doctor* in this book.

Other educational organisations that have provided ideas and material are the Paediatric Health Education Unit, Westmead Hospital, NSW, and the Parks Community Health Centre, Angle Park, SA. Colleagues who have given considerable advice are Malcolm Fredman, James Kiepert, Don Lewis, Robin Marks, Alison Walsh, Abe Rubinfeld and Lucie Stanford. The main reference was the Macmillan Guide to Family Health (1982) edited by Dr Tony Smith. Other reference material includes Better Health patient information (Victorian Government) and patient information conditions from Patient Co, United Kingdom.

Individual contributions, including full or part authorship, have come from the following practitioners, to whom I am indebted:

Lisa Amir (Establishing breastfeeding), Michael Axtens and Lou Sanderson (Common cold), Tim Bajraszewski (Osteoporosis), Bruce Barker (Angina, Diverticular disease, Hepatitis A, Osteoarthritis), Jenny Barry (Dysmenorrhoea), Robin Beattie (Stress: coping with stress), Grant Connoley (Melanoma), Joan Curtis (Autism), Denise Findlay (Breast self-examination, Pill: the combination pill), David Fonda (Incontinence of urine), John Goldsmid (Lice: head lice, Lice: pubic lice, Scabies), Jenny Gunn and Pat Phillips (Diabetes: blood glucose monitoring at home, Diabetes: healthy diet for diabetics), Anthony Hall (Warts), Judith Hammond (Premenstrual syndrome), Rod Kruger (Ear: otitis externa, Ear: wax in your ear, Foreign body in eye), Deirdre Lewis (Hirsutism), Jim McDonald (Haemorrhoids), Peter Macisaac (Travel: guide for travellers), Ian McKenzie (Child accident prevention in the home), Benny Monheit (Cannabis), Jane Offer (Understanding your menstrual cycle), William Phillips (Foreskin hygiene), Leanne Rowe (Prostate: test for prostate cancer), Jill Rosenblatt (Dysmenorrhoea, Menopause, Vaginal thrush), Ann Salmons (Asthma), Chris Silagy (Smoking—quitting), John Tiller (Sleep problems), Jane Tracey (Asperger's syndrome), Cynthia Welling (Incontinence of urine), Lyndall Whitecross (Pill: the combination pill), Richard Williams (Exercises for your knee, Exercises for your shoulder).

Finally, thanks go to Nicki Cooper, Kris Berntsen, Jenny Green and Caroline Menara for typing the manuscript.

Part 1

STAGES OF HUMAN DEVELOPMENT



Making your marriage work

When a couple marries, a bond of love is invariably present; this bond will at times be put to the test, because marriage is no ‘bed of roses’. For most couples this bond will grow, mature and become a wonderful source of joy despite the rough times. However, others may not cope well with the problems of living together. To split up is a terrible loss in every respect, especially for any children of the marriage.

Many troubled couples have achieved great happiness by following some basic rules of sharing.

The three keys to marital success are caring, respect and responsibility.

Some common causes of marital trouble

- Selfishness
- Financial problems/meanness
- Gambling
- Sickness (e.g. depression)
- ‘Playing games’ with each other
- Poor communication
- Unrealistic expectations
- Not listening to each other
- Drug or alcohol excess
- Jealousy, especially in men
- Fault finding
- Driving ambition
- Immaturity

Some important facts

- Research has shown that we tend to choose partners who are similar to our parents and that we may take our childish and selfish attitudes into our marriage.
- The trouble spots listed above reflect this childishness; we often expect our partners to change and meet our needs.
- If we take proper care and responsibility, we can keep these problems to a minimum.
- Physical passion is not enough to hold a marriage together—‘when it burns out, only ashes will be left’.
- While a good sexual relationship is great, most experts agree that what goes on out of bed counts for more.
- When we do something wrong, it is most important that we feel forgiven by our partner.

Positive guidelines for success

1. Know yourself. The better you know yourself, the better you will know your mate.
2. Share interests and goals. Do not become too independent of each other. Develop mutual friends, interests and

hobbies. Tell your partner ‘I love you’ regularly at the right moments.

3. Continue courtship after marriage. Spouses should continue to court and desire each other. Going out regularly for romantic evenings and giving unexpected gifts (such as flowers) are ways to help this love relationship. Engage in some high-energy fun activities such as massaging and dancing.
4. Make love, not war. Learn about sex and reproduction. A good sexual relationship can take years to develop, so work at making it better. Explore the techniques of lovemaking without feeling shy or inhibited. This can be helped by books such as *The Joy of Sex* and DVDs on lovemaking. Good grooming and a clean body are important.
5. Cherish your mate. Be proud of each other, not competitive or ambitious at the other’s expense. Talk kindly about your spouse to others—do not put him or her down.
6. Prepare yourself for parenthood. Plan your family wisely and learn about child bearing and rearing. Learn about family planning methods and avoid the anxieties of an unplanned pregnancy. The best environment for a child is a happy marriage.
7. Seek proper help when necessary. If difficulties arise and are causing problems, seek help. Your general practitioner will be able to help. Stress-related problems and depression in particular can be lethal in a marriage—they must be ‘nipped in the bud’.
8. Do unto your mate as you would have your mate do unto you. This gets back to the unconscious childhood needs. Be aware of each other’s feelings and be sensitive to each other’s needs. Any marriage based on this rule has an excellent chance of success.

The Be Attitudes (virtues to help achieve success)

BE honest	BE loyal
BE loving	BE desiring
BE patient	BE fun to live with
BE forgiving	BE one
BE generous	BE caring

Making lists—a practical task

Make lists for each other to compare and discuss.

- List qualities (desirable and undesirable) of your parents.
- List qualities of each other.
- List examples of behaviour each would like the other to change.
- List things you would like the other to do for you. Put aside special quiet times each week to share these things.

Pregnancy planning

Planning to become pregnant?

If you're planning to have a baby it is advisable to be well informed and prepared to provide the best care for yourself and your baby. Most pregnancies invariably go smoothly. Commonsense and scientific evidence tell us a healthy body is the best environment to achieve implantation of the fetus and carry it to term.

Getting pregnant

Most normal, fertile couples achieve a pregnancy within the first 12 months of trying. It can take up to 6 months after stopping the contraceptive pill for ovulation to resume. Women over 35 or who smoke can take twice as long to conceive. Intercourse 3 to 4 times a week at ovulation time maximises the chances of conception.

Nutrition

It is important to have a well-balanced and nutritionally sound diet. Women should aim for an ideal weight before conception. A high-fibre, low-fat diet that is rich in vitamins is the basis of good health. Eat freshly cooked or freshly prepared food. Drink lots of water (preferably filtered). Iodine intake is important, so use iodised salt and eat fish regularly.

Folic acid before pregnancy

Folic acid reduces the risk of having a baby with a neural tube defect such as spina bifida. Those at high risk include those previously affected and those with a family history, diabetes or on anti-epileptic medication, but folic acid supplements are advisable for all pregnant women. Those at risk should take 5 mg daily at least 1 month before pregnancy and ideally for 12 weeks. All other women should have 0.5 mg tablets daily 4 weeks before conception, continuing for 3 months after.

Exercise

Sensible, regular, non-contact exercise is important. Avoid high-level exercise and getting overheated.

Serious infections

Most conceptions have ideal outcomes but the fetus can be affected by certain infections, especially in the early stages of pregnancy, so it is wise to try to reduce the risk of contracting these infections while trying to become pregnant and throughout the pregnancy.

These infections include rubella, varicella, hepatitis B, syphilis, toxoplasmosis, listeria, cytomegalovirus and HIV. It is advisable to have blood tests for rubella, varicella, syphilis, hepatitis B and HIV.

Vaccination

Rubella (German measles) acquired during pregnancy is a big concern. Most women these days have been vaccinated and are probably immune but this immunity can wear off.

It is advisable to be tested before becoming pregnant and given the vaccine if not immune. It is also advisable not to become pregnant within 3 months of being vaccinated.

Varicella (chickenpox) is best avoided and the same rules apply as for rubella. Immunisation against hepatitis B is advisable.

Listeria and toxoplasmosis

These infections, which are potentially fatal to the fetus, are caused by organisms present in contaminated food, either uncooked or undercooked. Infected cats can transmit toxoplasmosis. If contracted during pregnancy, it has a high fetal death rate (30 to 50%).

To prevent listeria infection avoid unprocessed foods such as unpasteurised milk, soft cheeses, cold processed meats, pâté, raw seafood and smoked seafood. Also carefully wash raw vegetables, thoroughly cook all food of animal origin, reheat leftover foods and ready-to-eat food until steaming hot and always thoroughly clean utensils after preparing uncooked food.

To avoid toxoplasmosis pregnant women should get another person to clean cat litter boxes daily, wear disposable rubber gloves for handling soil likely to be contaminated with cats' faeces and carefully wash hands after gardening or handling raw meat.

Smoking, alcohol and other drugs

You should not smoke during pregnancy and ideally quit 3 months before conception. Avoid exposure to passive smoke and get a smoking partner to cooperate.

The National Health and Medical Research Council advises against drinking alcohol before and during pregnancy. Alcohol and other social drugs, especially amphetamines, can cause deformities in the child. Stop other recreational drugs and discuss over-the-counter drugs with your doctor. Caffeine intake should also be reduced.

Genetic counselling

Genetic or developmental disorders need to be considered if there is a history of a genetic condition in the family, or the mum-to-be is in an older age group (generally considered to be over 35).

Genetic disorders include thalassaemia, cystic fibrosis, haemophilia, Down syndrome and Tay-Sachs disorder. Your doctor will advise about testing for you and your partner.

Blood group

It is a good idea for both partners to know their blood group so they know their Rhesus factor. A negative blood group in the female combined with a positive group in the male partner requires careful attention.

Checkpoint summary

- Stop smoking.
- Stop alcohol and other social drugs.
- Reduce or stop caffeine intake.
- Review current medications.
- Follow a healthy diet rich in iron and calcium.
- Take folic acid for 4 weeks before conception.
- Have a good exercise routine.
- Ensure rubella, varicella and hepatitis B immunity.
- Have a breast check and Pap test.
- Eat freshly cooked and prepared food.
- Consider genetic and family history.
- Consider health insurance cover.
- Get moderate sunlight exposure to boost your vitamin D.

About your pregnancy

Congratulations on becoming an expectant parent—this is a very exciting time in your life, even though you may be inclined to feel flat and sick at first. Your baby is very special and deserves every opportunity to get a flying start in life by growing healthily in your womb. Pregnancy is a very normal event in the life cycle and usually goes very smoothly, especially if you have regular medical care.

Why have regular checks?

Antenatal care is considered to be the best opportunity in life for preventive medicine. It is important to check the many things that can cause problems—these are uncommon, but preventable. A special possible problem is pregnancy-induced hypertension, which can lead to a serious condition called pre-eclampsia or toxæmia of pregnancy, a condition of weight gain, high blood pressure and kidney stress, which shows up as protein in the urine.

Areas that need to be checked include:

- blood count
- blood grouping and Rhesus antibodies (Rh factor)
- immunity against infections that may affect the baby (e.g. rubella, varicella (chickenpox), hepatitis B and C, HIV)
- number of babies (one or more)
- size and state of your pelvis
- blood pressure
- urine (for evidence of diabetes or pre-eclampsia)
- cervix (Pap test)
- progress of the baby (e.g. size of uterus, heartbeat)
- mother's progress, including emotional state
- blood sugar (for possible diabetes)
- vitamin D
- risk for Down syndrome through first-trimester combined screening test.

When should you be checked?

The recommended routine is as early as possible and then every 4 to 6 weeks until 28 weeks of pregnancy, then every 2 weeks until 36 weeks, and then weekly until the baby arrives (usually 40 weeks). An ultrasound is usually performed at about 18 weeks.

What common things can cause problems in the baby?

- Infections such as rubella, varicella and genital herpes
- Diabetes (can develop in pregnancy)
- High blood pressure
- Smoking—retards fetus growth and should be stopped (if impossible, limit to 3 to 6 cigarettes per day)
- Alcohol—causes abnormalities, including mental retardation. The National Health and Medical Research Council has advised 'not drinking alcohol is the safest option for the developing fetus'
- Other social drugs
- Aspirin and various other drugs (check with your doctor)

What is usually prescribed?

Folic acid is now recommended for 4 weeks and preferably 12 weeks before getting pregnant, then for the first 3 months.

No iron tablets are needed if you have a healthy diet and do not have severe morning sickness.

What important areas should you attend to?

Nutrition

A healthy diet is very important and should contain at least the following daily allowances:

1. Eat most:
 - fruit and vegetables (at least 4 serves)
 - cereals and bread (4 to 6 serves).
2. Eat moderately:
 - dairy products—3 cups (600 mL) of milk or equivalent in yoghurt or cheese
 - lean meat, poultry or fish—1 or 2 serves (at least 2 serves of red meat per week).
3. Eat least:
 - sugar and refined carbohydrates (e.g. sweets, cakes, biscuits, soft drinks)
 - polyunsaturated margarine, butter, oil and cream.

Bran with cereal helps prevent constipation in pregnancy. Drink ample fluids (e.g. 2 litres of water a day).

Talk to your doctor about Listeria infection, which is contracted from fresh and unprocessed foods such as soft cheeses, pâté and unpasteurised milk.

Antenatal classes

Trained therapists will advise on antenatal exercises, back care, postural advice, relaxation skills, pain relief in labour, general exercises and beneficial activities such as swimming.

Breastfeeding and nursing mothers

Breastfeeding is highly recommended. Contact a local nursing mothers' group for support and guidance if you need help.

Employment and travel

Check with your doctor. Avoid standing in trains. Avoid international air travel after 28 weeks.

Normal activities

You should continue your normal activities. Housework and other activities should be performed to just short of feeling tired. However, get sufficient rest and sleep.

When should you contact your doctor or the hospital?

Contact your doctor or seek medical help:

- if contractions, unusual pain or bleeding occur before the baby is due
- if the baby is less active than usual
- if membranes rupture and a large amount of fluid comes out
- when you are getting regular contractions 5 to 10 minutes apart.

Help is only a telephone call away.

Breastfeeding and milk supply

Difficulties with breastfeeding are common, especially in the first week after birth. As a rule, the milk, which is present all the time, ‘comes in’ at any time from 24 hours after birth. It is common for the breasts to become engorged early on, but in some cases there is insufficient supply.

Engorged breasts

What is engorgement?

In some women, a few days after delivery the milk supply comes on so quickly that the breasts become swollen, hard and sore. This is called *engorgement*. There is an increased supply of blood and other fluids in the breast as well as milk.

What will you notice?

The breasts and nipples may be so swollen that the baby is unable to latch on and suckle. The soreness makes it difficult for you to relax and enjoy your baby.

How are engorged breasts managed?

- Feed your baby on demand from day 1 until he or she has had enough.
- Finish the first breast completely; maybe use one side per feed rather than some from each breast. Offer the second breast if the baby appears hungry.
- Soften the breasts before feeds or expressing with a warm washer or shower, which will help get the milk flowing.
- Avoid giving the baby other fluids.
- Express a little milk before putting the baby to your breast (a must if the baby has trouble latching on) and express a little after feeding from the other side if it is too uncomfortable.
- Massage any breast lumps gently towards the nipple while feeding.
- Apply cold packs after feeding. Many women use washed, cool, crisp cabbage leaves (left in the refrigerator) between feeds. An opening is left for the nipple and the leaves are usually changed every 2 hours when appropriate. Some women prefer to use hot packs.
- Wake your baby for a feed if your breasts are uncomfortable or if the baby is sleeping longer than 4 hours.
- Use a good, comfortable bra.
- Remove your bra completely before feeding.
- Take ibuprofen or paracetamol regularly for severe discomfort.

Remember that regular feeding is the best treatment for your engorged breasts. Follow your demand and your baby's demand. As your breasts are used in this way, they gradually become softer and more comfortable.

Insufficient supply

Studies have shown that many women wean because of low milk supply. The problem is due mainly to lactation mismanagement such as poorly timed feeds, infrequent feeds and poor attachment. This is sometimes a problem in mothers who tend to be under a lot of stress and find it hard to relax. A ‘let down’ reflex is necessary to get the milk supply going, and sometimes this reflex is slow. If there is insufficient supply, the baby tends to demand frequent feeds, may continually suck his or her hand, have hard stools and fewer wet nappies, and will be slow in gaining weight.

Remember that there is always some milk present in your breasts. Mothers tend to underestimate their milk supply.

What should you do?

- Try to practise relaxation techniques to help condition your ‘let down’ reflex.
- Put the baby to your breast as often as he or she demands, using the ‘chest to chest, chin on breast’ method.
- Feed your baby more often than usual.
- Give at least one night feed.
- Express after feeds, because the emptier the breasts are, the more milk will be produced.
- Make sure you get adequate rest, eat well and drink ample fluids, but if you feel overly tired go to your doctor for a check-up.



Establishing breastfeeding

There are three important things that you should know about breastfeeding:

1. Positioning the baby on the breast
2. The 'let down'
3. Supply and demand

Occasionally some women experience engorged breasts or insufficient milk supply until breastfeeding is fully established.

Positioning

Your posture

- Make yourself comfortable.
- Sit upright, but let your shoulders relax.
- Support yourself with cushions or a footstool, if necessary.

Your baby

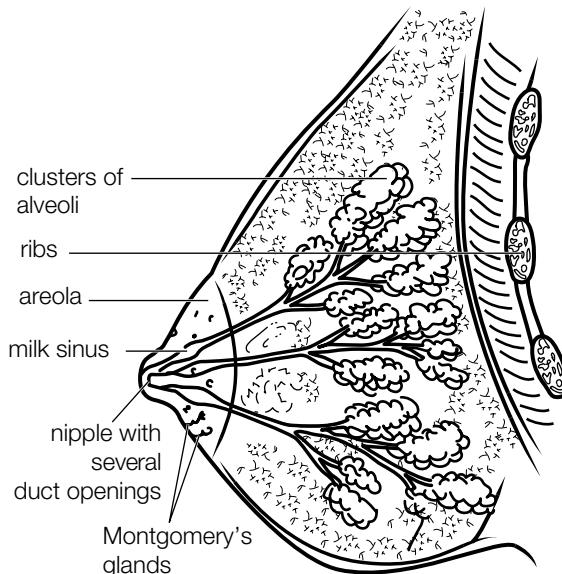
- Unwrap the baby's arms.
- Turn the baby's body towards yours.
- Have the baby's mouth at the same level as your nipple.
- Support the baby's body well.
- Hold the baby close to you with their chest close to yours.

Latching on

- Support your baby across the back of the shoulder.
- Tickle the baby's lips with your nipple until the mouth opens wide.
- Quickly move the baby onto the breast when the mouth is wide open. (Do not try to bring your breast to the baby.)
- Make sure the baby has a large mouthful of breast and not just the nipple. Aim your nipple at the top lip, so that the lower lip will be well below your nipple.
- The baby's tongue should be over the lower gum. (This is hard to see yourself.)
- If you feel the baby is not well positioned, slip your little finger into the corner of the mouth to break the suction, take the baby off and try again. You are both learning this, so take a few slow breaths and take your time.
- If you need to support your breast, use your four fingers under the breast, well away from the areola.

Let down

When your baby is feeding, the nerves in the nipple start a reflex action that allows the milk-producing alveoli to be squeezed, which pushes milk along the ducts towards the nipple. This is called the 'let down' reflex. Some women notice a tingling or a pins-and-needles sensation or a fullness when this occurs. Others notice leaking from the other breast or nothing at all. You may notice that the baby changes from



Anatomy of the breast

sucking quickly at the breast to a slower suck-swallow-suck-swallow pattern.

The milk higher up in the breast (the hindmilk) is rich in fat and kilojoules. It is important that you have a 'let down', so that the baby does not get only foremilk.

If you are anxious, in pain or embarrassed, your 'let down' may be slow. If possible, try to address these factors before feeding. Once breastfeeding is well established, you will be able to breastfeed anywhere, but in the early days you need a supportive environment.

Supply and demand

Your breasts produce milk on the principle of supply and demand. This means that the more the breasts are emptied, the more milk is made. When breasts are allowed to remain full, they get the message to slow down milk production.

Your baby automatically controls his or her food intake by taking as much as needed. When the baby needs to increase your supply, he or she will feed more frequently for a couple of days.

If your supply is low, you can increase it by expressing milk after feeds. You can offer this milk to your baby after the next feed or in the evening. Usually your breasts will feel fuller after a few days of resting and expressing.

Mastitis with breastfeeding

What is mastitis?

Mastitis is an area of inflammation of breast tissue, in particular the milk ducts and glands of the nursing mother. It is caused by a cracked nipple or blockage of the ducts due to a problem with drainage of the milk. Germs from the outside get into and grow in the stagnant milk.

What are the symptoms?

You may feel a lump and then a sore breast at first. Then follows a red, swollen, tender area (see diagram) with fever, tiredness, weakness and muscle aches and pains (like having influenza).

What are the risks?

If treated early and properly, mastitis starts to improve within 48 hours. Doctors regard it as a serious and rather urgent problem, because a breast abscess can quickly develop without treatment and the abscess may require surgical drainage, usually by needle aspiration. Apart from the bacterial infection, infection with *Candida* (thrush) may occur, especially after the use of antibiotics. *Candida* infection usually causes severe breast pain—a feeling like a hot knife or hot shooting pains, especially during and after feeding. A breast abscess is diagnosed by ultrasound examination.

What is the treatment?

- Antibiotics: your doctor will prescribe a course of antibiotics, usually for 10 days. If you are allergic to penicillin, tell your doctor.
- Painkillers: take aspirin or paracetamol when necessary for pain and fever.
- Keep the affected breast well drained.
- Keep breastfeeding: do this frequently and start with the sore side. It is safe to do so.
- Make sure the baby is latched on properly and change feeding positions to drain the milk.
- Heat the sore area of the breast before feeding: have a warm shower or use a warm face washer or warm hot-water bottle.

- Cool the breast after feeding: use a cold face washer from the freezer.
- Apply cool, washed cabbage leaves over the affected side between feeds (optional).
- Massage any breast lump gently towards the nipple while feeding.
- Empty the breast well: hand express if necessary.
- Get sufficient rest: rest when you feel the need to do so and get help in the home.
- Keep to a nutritious diet and drink plenty of fluids.

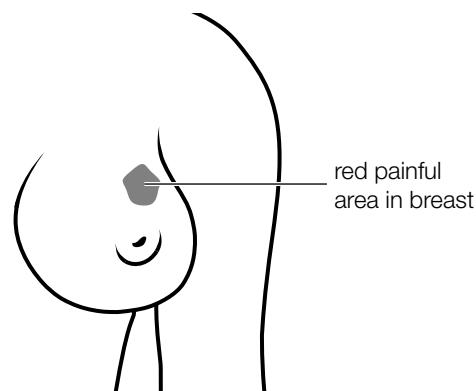
How can it be prevented?

Breast engorgement and cracked nipples must be attended to. It is important to make sure your milk drains well. Faulty drainage can be caused by an oversupply of milk, missed feeds, the breast not being fully emptied (e.g. from rushed feeding, poor attachment or wrong feeding positions), exhaustion, poor nutrition and too much pressure on the breast (e.g. bra too tight and sleeping face-downwards).

Keep the breasts draining by expressing or by waking the baby for a feed if he or she sleeps for long periods. For an oversupply, try feeding from one breast only at each feed. Avoiding caffeine and smoking may also help.

Golden rule: 'Heat and drain the breasts.'

Note: It is quite safe to continue breastfeeding with the affected breast unless your doctor advises otherwise.



Miscarriage

After a miscarriage you will undoubtedly be confused and wondering why this sad event happened to you. The main thing is to remember that it was nothing that you did wrong, and so you should not feel any sense of blame or guilt.

What is a miscarriage?

A miscarriage, which is called a spontaneous abortion in medical terms, is the spontaneous ending of pregnancy before the baby (fetus) can survive outside the womb. This is usually considered to be up to the 20th week. A loss after this time is called a stillbirth. Sometimes it is complete (when both fetus and afterbirth are expelled); sometimes it is incomplete (when only part of the pregnancy is expelled).

What are the surprising facts?

- About 1 in 4 pregnancies are 'lost' (i.e. miscarried).
- Many are lost soon after conception; in such a case the woman may not be aware of anything except a small alteration in her period.
- In most cases, the fetus is lost in the first 12 weeks and is obvious to the mother.

What are the symptoms?

The first symptom is loss of blood from the vagina, which can vary from slight to a heavy flow. At this stage it is called a threatened miscarriage.

When the solid products are passed, you feel pain due to cramping of the uterus. It is usual for only some parts to be passed to the outside, while others (e.g. the afterbirth) stay behind. This is referred to as an incomplete miscarriage or abortion. However, if the miscarriage is later in the pregnancy (such as at 20 weeks), it is more usual to have a complete abortion.

What is the cause of miscarriage?

Most miscarriages occur without an obvious cause. However, in many there is something wrong with the developing fetus, and a miscarriage is nature's way of handling the problem.

This abnormality may be caused by a genetic disorder, or by a viral infection that has affected the fetus in the first 12 weeks. Often the mother is unaware that she has picked up a serious infection (such as rubella, influenza or cytomegalovirus), but it is harmful to the delicate growing tissues of the fetus.

In other cases, abnormalities of the uterus may not allow the fertilised egg to attach to its lining, or it may reject the developing fetus later on.

The mother may also have a clotting disorder of the blood.

Blighted ovum

This occurs when a pregnancy sac is formed in the uterus but there is no developing baby and the sac is expelled. It is a common cause of miscarriage.

What are the risks?

There is usually no risk to the mother's health. However, if the miscarriage is incomplete and not treated, infection or anaemia from blood loss could occur. If you get fever, heavy bleeding, severe pain or an offensive discharge, contact your doctor. After a miscarriage, you may feel emotionally upset or depressed, with feelings of loss and grief. If so, you will require help.

Will it happen again?

Having a miscarriage doesn't make it any more likely you will have another miscarriage. The odds favour your next pregnancy being successful. There is no special treatment to prevent any further miscarriages, and it is best left to nature to take its course. However, it is advisable to keep healthy and not indulge in alcohol, smoking or the use of other drugs.

What is the treatment?

It is usual to have a surgical 'cleaning' of your uterus, especially if the miscarriage was early in the pregnancy and bleeding continues. This is called a dilation and curettage (D&C). However, many women, in consultation with their doctor, choose to 'let nature take its course' and let it resolve by itself. The bleeding may then stop in a few days. If it persists, a D&C is then an option.

Other aspects of treatment include:

- basic pain medication such as paracetamol
- blood tests and possible ultrasound examination
- checking for Rhesus blood grouping (a Rhesus-negative person may be given immunoglobulin)
- reduced activity and rest for at least 48 hours.

Pay attention to any adverse emotional reactions—make sure you talk about any unusual feelings. Talk over your feelings with your partner and family.

You will need at least a week off work.

How soon should you wait before trying again?

You can safely start trying to get pregnant again very soon. It is best to wait until you have had at least one normal period. Your next period may be heavy and abnormal. Use sanitary towels and not tampons for the next 4 weeks.

Make sure that your body is ready before having sex again. It usually takes a while to become interested in sex again, and therefore partners have to be very patient and understanding.

Nipple problems while breastfeeding

Sore nipples

Sore nipples are a common problem and are considered to be caused mainly by the baby not taking the nipple into its mouth properly, often because of breast engorgement. The key point is to establish correct attachment. Any pain when the baby latches on indicates incorrect attachment. The problem is preventable with careful attention to the position of the baby at the breast and the baby's sucking technique. Other causes include a tongue tie in the baby, Candida infection and spasm of the nipple.

How are sore nipples managed?

It is important to be as relaxed and comfortable as possible (with your back well supported) and for your baby to suck gently, so:

- Try to use the feeding position 'chest to chest, chin on breast'.
- Vary the feeding positions. (Make sure each position is correct.)
- Start feeding from the less painful side first if one nipple is very sore.
- Express some milk first to soften and lubricate the nipple. Avoid drying agents (such as methylated spirits, soap and tincture of benzoin) and moisturising creams and ointments, which may contain unwanted chemicals and germs.
- If pain occurs during attachment, break the suction immediately with a finger and try re-attaching.
- Gently break the suction with your finger before removing the baby from the breast. (Never pull the baby off the nipple.)
- Apply covered ice to the nipple to relieve pain.
- Keep the nipples dry by exposing the breasts to the air and/or using a hair dryer on a low setting.
- If you are wearing a bra, try a pliable nipple shield such as a Cannon shield inside the bra. Do not wear a bra at night.

Cracked nipples

Cracked nipples are usually caused by the baby clamping on the end of the nipple rather than applying the jaw behind the whole nipple. Not drying the nipples thoroughly after each feed and wearing soggy breast pads are other contributing factors. Untreated sore nipples may progress to painful cracks.

What are the symptoms?

At first, the crack may be so small that you cannot see it. The crack is either on the skin of the nipple or where it joins the flat, dark part of the nipple (the areola). A sharp pain in your nipple with sucking probably means a crack has developed. Feeding is usually very painful, and bleeding can occur.

How are cracked nipples managed?

Cracked nipples nearly always heal when you get the baby to latch onto the breast fully and properly. It usually takes only 1 to 2 days to heal.

- Follow the same rules as for sore nipples.
- Do not feed from the affected breast—rest the nipple for 1 to 2 feeds.
- Express milk from that breast by hand.
- Feed that expressed milk to the baby.
- Start feeding gradually with short feeds.
- A sympathetic expert such as an experienced nursing mother, midwife or lactation consultant will be a great help if you are having trouble coping. They can observe and teach the correct technique.
- A pliable nipple shield may be used for a short period.
- Contact your doctor if the problem is not resolving.
- Take paracetamol or ibuprofen just before nursing to relieve pain.

Inverted nipples

What is an inverted nipple?

It is a nipple that inverts or moves into the breast instead of pointing outwards when a baby tries to suck from it. When the areola is squeezed, the nipple retracts inwards.

What is the treatment?

During pregnancy, rolling and stretching the nipple by hand can be helpful. Your partner can assist with gentle oral and manual stimulation of your breasts and nipples.

A simple treatment, which should start at the beginning of the seventh month of pregnancy, is the Hoffman technique:

1. Draw an imaginary cross on the breast with the vertical and horizontal lines crossing at the nipple.
2. Place the thumbs or the forefingers opposite each other at the edge of the areola on the imaginary horizontal line. Press in firmly and then pull the thumbs (or fingers) back and forth to stretch the areola.
3. In the vertical position, pull the thumbs or fingers upwards and downwards.

Repeat this procedure about 5 times each morning. The nipple will become erect and is then easier to grasp, so that it can be slowly and gently drawn out.

After the baby is born, try to breastfeed early while the sucking reflex is strong and your breasts are soft.

Before breastfeeding, draw the nipple out by hand or with a breast pump. Check that your baby is correctly positioned on the breast. Usually, with time, inverted nipples will be corrected by the baby's sucking.

Postnatal depression

It is quite common for women to feel emotional and flat after childbirth; this is thought to be due to hormonal changes and to the feeling of anticlimax after the long-awaited event. There are two possible separate, important conditions:

1. postnatal blues
2. postnatal (or postpartum) depression.

Postnatal blues

'The blues' are a very common problem that arises in the first 2 weeks (usually from day 3 to day 5) after childbirth.

What are the symptoms?

- Feeling flat or depressed
- Mood swings
- Irritability
- Feeling emotional (e.g. crying easily)
- Tiredness
- Insomnia
- Lacking confidence (e.g. in bathing and feeding the baby)
- Aches and pains (e.g. headache)

What is the outcome?

Fortunately 'the blues' are a passing phase and last only a few days. It is important to get plenty of help and rest until they go away and you feel normal.

What should you do?

All you really need is encouragement and support from your partner, family and friends, so tell them how you feel.

- Avoid getting overtired: rest as much as possible.
- Talk over your problems with a good listener (perhaps another mother with a baby).
- Accept help from others in the house.
- Allow your partner to take turns getting up to attend to the baby.

If the blues last longer than 4 days, it is very important to contact your doctor for advice.

Postnatal depression

About 1 in 8 mothers develop a very severe depression within the first 6 to 12 months (usually in the first 6 months) after childbirth. They seem to get 'the blues' and cannot snap out of it. The onset is usually in the first 3 days after childbirth. The depression ranges from mild to severe. It is caused by the marked hormonal changes of pregnancy, birth and lactation. Exhaustion from lack of sleep, family relationship problems and lack of support are also contributing factors.

What are the symptoms?

Some or all of the following may occur:

- a feeling that you cannot cope with life (e.g. hopelessness, helplessness)

- continual tiredness
- feeling a failure as a mother
- sleeping problems
- eating problems (e.g. poor appetite or overeating)
- loss of interest (e.g. in sex)
- difficulty in concentrating and remembering things
- tension and anxiety with possible agitation
- feeling irritable, angry or fearful
- getting angry with the baby
- feeling rejected
- marital problems (e.g. feeling rejected or paranoid)
- marked swings of mood
- fearfulness.

What are the risks?

This is a very serious problem if not treated, and you cannot shake it off by yourself. There may be risks to you, your relationship and your baby and it is very important that you seek help.

What should you do?

You must be open and tell everyone how you feel. You need help. Take your baby to the childhood centre for review. It is most important to consult your doctor and explain exactly how you feel. Your problem can be treated and cured with appropriate support, counselling and sometimes also antidepressant medicine.

Support groups

There are some excellent support groups for women with postnatal depression, and it is worth asking about them and joining them for therapy.



Allergy in your baby

What is allergy?

Allergies are sensitive reactions that occur when the body's immune system reacts in any unusual way to proteins (called allergens), particularly foods, airborne dust, animal hair and pollens. As a result the body produces naturally occurring inflammatory chemicals called IgE antibodies, resulting in a wide range of conditions such as hay fever, eczema, hives and bowel problems. The condition is also called atopy.

Allergies are common in babies and children. They usually disappear as the child grows older, but sometimes can continue into adult life.

Unlike most of the common childhood illnesses (such as measles and chickenpox), an allergy can have many symptoms, and these vary widely from child to child. Allergies are not infectious and cannot be transmitted from child to child.

How to tell if a baby has an allergy

An allergic reaction might take hours or even days to develop and can affect almost any part of the body. Symptoms may be any of the following:

1. Digestive system (includes stomach and intestines): nausea, vomiting and spitting up of food, colicky behaviour in the young baby (including pulling away from the breast), stomach pain, diarrhoea, poor appetite, slow weight gain.
2. Respiratory system (includes nose, throat and lungs): runny nose, sneezing, wheezing, asthma, recurring attacks of bronchitis or croup, persistent cough.
3. Skin: eczema, hives, other rashes.
4. Other: disturbed sleep, irritability, crying fits, headache.

What are the causes?

Common causes of allergic reaction are foods and airborne irritants.

- Foods that commonly cause allergic reactions include milk and other dairy products, eggs, peanut butter; sometimes oranges, soya beans, chocolate, tomatoes, fish and wheat.
- Airborne particles linked with allergic reactions include dust mites, pollens, animal hair and moulds.

Some reactions are caused by food additives such as colourings, flavourings and preservatives. Additives are found in many prepared foods (e.g. lollies, sauces, ice-cream, cordial, soft drinks, biscuits, savoury snacks and processed meats).

The allergic reaction to dairy products, particularly cow's milk, has almost the same symptoms (stomach pain and diarrhoea) as those that occur when a baby has lactose intolerance, which is when he or she cannot digest the sugar (lactose) in dairy products. The correct diagnosis is a matter for your doctor.

Although they don't strictly cause allergic reactions, some soaps and detergents can cause a chemical irritation of the skin and aggravate some skin conditions.

Is allergy inherited?

Allergy cannot be inherited directly by children from their parents, but children from families whose members

have allergies have a greater chance of becoming allergic themselves. However, anyone can become allergic.

What is the management?

Feeding

Breastfeeding of allergy-prone babies for the first 6 months might diminish eczema and other allergic disorders during infancy.

If breastfeeding is not possible, choose a breast milk substitute (formula) carefully. Get advice from your doctor or infant welfare nurse.

What happens when solids are introduced?

If possible, do not start solids until the baby is 5 or 6 months old. Start one food at a time, in small amounts. The quantity can be increased the next day if no reaction occurs.

New foods should be introduced at least several days apart. Particular care should be taken when starting foods that most commonly cause allergic reactions (dairy products, eggs, citrus fruits and peanut butter). They should be avoided during the first 6 to 9 months.

Be alert!

If possible, prepare the baby's food using fresh ingredients. For example a child with cow's milk allergy should avoid cow's milk in any form. Read labels carefully to check ingredients in products.

Other allergies

Many babies and children develop allergies to house dust and animal hair. Vacuuming regularly and keeping pets outside will reduce the problem.

Air bedding regularly. Damp and poorly ventilated homes are subject to mould, which can cause allergy. Both the mould and its cause should be eliminated.

Other things that can be done

- Cotton clothing is best for babies and children with skin problems.
- Avoid strong soaps, detergents and nappy wash solutions.
- Boil the baby's bottles rather than using chemical solutions.
- Use household chemicals such as strong fly sprays, perfumes and disinfectants sparingly, and air the house thoroughly afterwards.
- Do not smoke or allow others to smoke when your baby is in the room.
- If your doctor or other health provider has prescribed medicines or vitamins for your child, ask the pharmacist for brands that are free from additives such as colouring, flavouring, preservative and sugar.

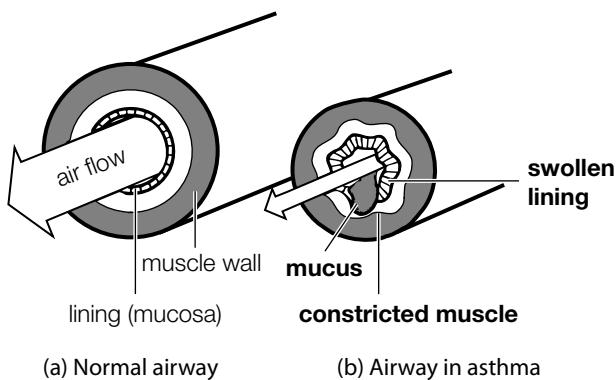
► FURTHER INFORMATION

- The Australasian Society of Clinical Immunology and Allergy (www.allergy.org.au)
- Your doctor
- Your infant welfare nurse

Asthma in children

What is asthma?

Asthma is a common chest condition that affects the small air passages (bronchi) of the lungs, which are very sensitive. During an asthma attack these breathing tubes become narrow from the spasm of the muscles in the wall and the secreting of mucus. This makes it harder for the air to flow in and out of the lungs.



How common is asthma?

About 1 child in 4 or 5 may wheeze and at least half of these have only mild asthma. It is more common between the ages of 2 and 8 years. Many children appear to 'grow out of it' by puberty, but a small number have it again as adults.

What causes asthma?

Asthma is brought on in different ways for each child, and the timing of an attack is often unpredictable. Trigger factors include a cold, a sudden change in weather or temperature, dust, allergies, cigarette smoke, pollens, some animals, certain foods (e.g. peanuts) and certain drugs (e.g. aspirin). Often it is difficult to know what has caused an attack.

How long does an attack last?

It may last from a few hours to a few days. Most children are normal between attacks, although there may be a mild amount of wheezing heard with the stethoscope.

How do I know if my child has asthma?

The main symptoms are a cough, breathing problems and a wheeze. A persistent cough may be a symptom of asthma. The cough is most likely to occur during the night (usually in the early hours of the morning), with cool weather and with exercise. These symptoms should be checked out by your doctor.

What is the medicine for asthma?

There are medicines that really help children with asthma. Three types of medications used in children are:

- relievers (such as Bricanyl, Ventolin and Atrovent) that treat the spasm during an attack and are quick-acting—they are called bronchodilators
- preventers (such as QVAR, Pulmicort, Flixotide, Tilade and Intal) that help prevent attacks by treating the inflammation in the airways
- anti-inflammatory agents (such as Accolate and Singulair) that can be added to the preventers for children with frequent asthma.

If your child is having asthma attacks more than once a month, or needing lots of relievers, talk to your doctor about preventive treatment.

Remember to keep a smoke-free environment at home and in the car.

Methods of delivery of medicine

The most effective delivery is by inhalation into the lungs. This can be done using a:

- puffer with a spacer device
- dry powder inhaler
- nebuliser.

It is usual to use spacer devices, which are very effective. They are plastic chambers that make delivery easier to manage and allow the medication to get well into the lungs. In infants and toddlers a face mask attached to the spacer is used to help deliver the aerosol to the lungs.

The Asthma Action Plan

Ask your doctor or asthma nurse educator to provide you with an Asthma Action Plan for an acute attack or for an emergency situation.

A guide to what to do is as follows:

In an acute attack

- Sit the child down and remain calm.
- For coughing and wheezing give reliever medication (4 separate puffs, one puff at a time and take 4 breaths from a spacer) over 4 minutes and then repeat as needed.
- If this fails to control the symptoms, contact your doctor or go to a hospital emergency department.

In an emergency

Call an ambulance if your child is:

- finding it difficult to breathe
- unable to talk
- turning blue
- getting worse quickly
- drawing in the chest wall

and say 'my child is having a severe asthma attack'.

While waiting for the ambulance, give your child 4 puffs of reliever medication (such as Ventolin) every 4 minutes using a spacer device.

Atopic eczema

What is atopic eczema?

Eczema or atopic dermatitis refers to a red, scaly, itchy, sometimes weeping skin condition. Atopy refers to an allergic condition that tends to run in families and includes problems such as asthma, hay fever, atopic eczema and skin sensitivities. However, anyone can become allergic.

Atopic eczema is common and affects about 5% of the population. It is not contagious. No particular cause has been found.

What are the symptoms?

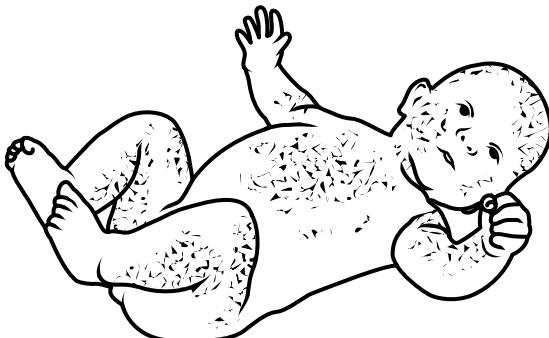
In mild cases the skin is slightly red, scaly and itchy and covers small areas. In infants it usually starts on the face and scalp; in severe cases it can cover large areas, is very itchy and starts to weep and become crusted. The child may be very irritable and uncomfortable.

What ages are affected?

Eczema usually starts in infants from any age, but often before 12 months. It tends to improve from 1 to 2 years, but the rash may persist in certain areas, such as the flexures of the elbows and knees, the face and neck, and the fingers and toes. It tends to be coarse, dry and itchy at this stage. Many children have outgrown it by late childhood, most by puberty, but a few have it all their lives.

What are the risks?

It is not a dangerous condition, but infection can occur from scratching, especially if the skin is raw. Contact with herpes simplex (cold sores) can produce nasty reactions. Patients have a tendency to develop asthma and other 'atopies' later.



Typical sites of infantile eczema

What things appear to aggravate eczema?

- Sand, especially sandpits
- Dust, especially dust mites

- Soaps and detergents
- Rough and woollen clothes
- Animal fur
- Abrasive surfaces (e.g. carpets, sheepskin)
- Scratching and rubbing
- Dry skin
- Frequent washing with soap, especially in winter
- Drying preparations such as calamine lotion
- Extremes of temperature, especially cold weather with low humidity and heat
- Stress and emotional upsets
- Teething
- Certain foods (which parents may identify).

Note: The relationship of diet to eczema is controversial and uncertain. It may be worthwhile avoiding certain suspect foods for a 3 to 4 week trial—these include cow's milk, fish, eggs, wheat, oranges and peanuts.

What about skin tests and injections?

The value of allergy testing is doubtful, and 'desensitisation' injections may make the eczema worse.

What is the treatment?

Self-help

- Avoid soap and perfumed products—use a bland bath oil in the bath (e.g. QV, Alpha Keri) and a bland cleansing agent (e.g. sorbolene cream).
- Apply a moisturising agent to dry, irritated skin 3 times a day. Use sorbolene or paraffin creams (e.g. Dermeze, Redwin, Egozite baby cream) or others that help.
- Older children and adults should have short, tepid showers.
- Avoid rubbing and scratching—use gauze bandages with hand splints for infants.
- Avoid sudden changes of temperature, especially those that cause sweating.
- Wear light, soft, loose clothes such as cotton clothing, which should always be worn next to the skin.
- Avoid dusty, dirty conditions and sand, especially sandpits.
- Consider house dust mite eradication steps.

Note: The key is to avoid exposure to 'triggers' that make it worse.

Medical help

Your doctor, who should be consulted if you are concerned, may prescribe antihistamine medicine for the allergy and sedation, special moisturising creams and lotions, antibiotics for infection (if present) and milder dilute corticosteroid creams, which can be very effective.

Attention deficit hyperactivity disorder

What is attention deficit hyperactivity disorder (ADHD)?

ADHD is a developmental disorder of children with the key features of problematic behaviour, poor concentration and difficulty with learning. It affects about 1 in 20 to 30 children and is far more common in boys, being about 6 times more prevalent compared with girls.

It is usually present from early childhood, even in infancy, and has an onset no later than 7 years of age.

What is the cause of ADHD?

The cause is not clearly known but many experts believe that it has a hereditary basis. Having ADHD does not imply that the child has an illness or is not intelligent.

What are the main diagnostic features of ADHD?

The three characteristic features are:

- inattention—has difficulty concentrating and following directions, and forgets instructions
- overactivity—the hyperactive child cannot seem to stay still, and is fidgety and restless
- impulsiveness—a tendency to ‘shoot from the hip’ and do ‘stupid things’ without thinking or taking steps to correct this problem; a tendency to talk over the top of others and to be accident-prone.

The symptoms must be present in at least two situations, for example both at home and at school.

Note: Not all children with ADHD are overactive and not all children who are inattentive, overactive and impulsive have ADHD.

It is very important to accurately diagnose ADHD before putting such a label on the child—there are no foolproof diagnostic tests, including blood tests, to make the diagnosis. There has to be a consistent pattern to the behaviour and not an occasional breakdown in attention span or impulsive acts, which can happen to any normal child. Your doctor can make an assessment of the child and arrange a referral.

What are other features?

Day-to-day problems can include some or all of the following:

- irritability, including a ‘short fuse’
- moodiness
- poor coordination (clumsiness)
- disorganisation
- inflexibility
- social clumsiness
- poor school performance with learning disability in at least 25% of children with ADHD
- difficulty mixing with other children
- lack of a consistent work or study pattern
- causes a lot of distress in the home
- poor short-term memory.

Symptoms range from mild to severe.

How does the child with ADHD affect the family?

Parents usually come in looking exhausted and frustrated with the comment, ‘I didn’t realise raising children was this hard’. The patience of all members of the family can be stretched to breaking point.

What can be done?

The child should be assessed by an expert in the area. There are many things that can be done to help children and their families, including medication, teacher/school support and parent support groups. The strategies include positive parenting and teaching behaviour strategies.

Help for the child

- Protect their self-esteem.
- Praise any positive behaviour.
- Be consistent in your approach and with routines.
- Don’t make a thing out of minor behavioural issues.
- Have appropriate ‘punishments’ for major misbehaviours (time-out is suitable for 2 to 10 year olds).
- Old-fashioned ‘toe in the backside’ and ‘clip over the ears’ methods do not work.
- Have clear and simple rules to follow.
- When giving instructions, be close to the child and insist on having their full attention.
- Watch for risk-taking behaviours and be protective.
- Establish clear-cut routines, rules and consequences.

The child needs much understanding and support from the family, teachers and therapists, as their difficult behaviour is not intentional.

Help for the family

- Work as a team within the family.
- Work as a team with teachers and community contacts.
- Try to join a support group.
- Get frequent breaks from the child.

Medication

The use of medicines for ADHD is controversial but there are effective medications available. Your doctor will be able to advise on the best option. If the prescribed drug proves helpful, it may be necessary to use it for years.

Is a special diet recommended?

It is always valuable to encourage a good, balanced diet and a dietitian can help. A special exclusion diet such as avoiding junk foods, colouring and preservatives has not been shown to be of significant benefit.

What is the outlook?

As a rule children do not grow out of ADHD. Although many symptoms can improve with time, more than one-half of children will carry some degree of the disorder into adult life.

What is autism?

Autism, described first by Kanner in 1943, is a developmental disorder commencing in the first 3 years of life. It affects at least 8 children in 10 000; boys are 4 times more likely than girls to be affected. The main features are:

- inability of the child to form normal social relationships, even with his or her own parents
- delayed and disordered language development (about one-half of all autistic children never learn to speak effectively)
- obsessive, repetitive and ritualistic behaviours such as hand flapping, spinning, twiddling pieces of stick or string and hoarding unusual objects
- restricted range of interests
- lack of imagination and difficulty in development of play
- anxiety over changes in routine
- tantrums when frustrated, confused or anxious.

It is now recognised that there are a variety of types of autism, hence the modern term 'autistic spectrum disorder'. Asperger's syndrome is one of the important types.

What is the cause?

The cause of autism is unknown and no one particular anatomical, biochemical or genetic disorder has been found in those who suffer from it. It now appears to have multiple causes. The problem appears to lie in that part of the brain responsible for the development of language.

What are the symptoms?

Many autistic children appear physically healthy and well developed. However, they may show many disturbed behaviours. As infants they may cry a lot and need little sleep. They resist change in routine and often refuse to progress from milk and baby food to a solid diet. They avoid eye contact and often behave as if they are deaf. Normal bonding between mother and child does not occur and prolonged bouts of crying do not respond to cuddling. As the children get older and more agile they may show frequent tantrum behaviour, destructiveness, hyperactivity and a disregard for danger, requiring constant supervision to prevent harm to themselves or their environment.

The diagnosis is best made by a team of experts observing the child, but remains difficult under the age of 2 (even 3) years. There are no laboratory tests available.

What is the treatment?

There is no medical treatment for autism, although some medications may help for some of the symptoms. If the child's behaviour or skills deteriorate, a thorough medical check is required because the autistic child does not indicate pain or communicate clearly. Best results are obtained by early diagnosis, followed by a firm and consistent home management and early intervention program. Later the child will benefit from remedial education, either in a specialised facility or in a regular school with specialist backup. Speech therapy can help with language development, and non-speaking children can be taught alternative methods of communication.

Most difficult behaviours can be reduced or eliminated by a program of firm and consistent management.

Parents and siblings usually need support and regular breaks.

What is the outlook?

Behavioural and emotional problems may get worse in adolescence, especially during sexual development. Most autistic children have some degree of mental retardation, although some may have normal or superior intelligence. Only about 5% will progress to the stage of independent living and open employment as adults. Most require at least some degree of lifelong support in order to remain within the community and enjoy a good quality of life. As their life expectancy is normal, this represents a considerable commitment from their families and community support services.

Autistic people have an increased risk of developing epilepsy, and many suffer psychiatric complications such as anxiety, depression and obsessive-compulsive disorder as they get older. These require appropriate medical treatment.

Where to seek advice

Consult your general practitioner, who may refer you to a paediatrician or child psychiatrist. Assistance can also be obtained from autism associations in each state, or the national organisation Autism Spectrum Australia, which can provide full information regarding assessment and diagnostic services, management programs and family support services.

Autism: Asperger's syndrome

What is Asperger's syndrome?

Also known as high-functioning autism, Asperger's syndrome is one of the autism spectrum disorders that presents in childhood with impairments in social interaction and a restricted range of interests and activities. More boys than girls are diagnosed with Asperger's syndrome. It is a developmental disability and is due to a difference in the way the brain develops, leading to particular difficulties in processing certain types of information. People with Asperger's syndrome can learn social rules and behaviours and so minimise or reduce their disability, but their fundamental difficulties tend to persist throughout life.

What are the typical features?

People with Asperger's syndrome may have difficulty:

- understanding the rules of social behaviour and communication (e.g. how to greet someone appropriately and take turns in conversations)
- 'reading' the facial expressions and body language of others (e.g. noticing the signs that someone is bored, happy or sad)
- understanding metaphor, common expressions, sarcasm or irony. They tend to interpret language in very concrete and literal ways (e.g. when told to 'pull up their socks', they will look down at their feet and wonder what to do with their clothing)
- forming friendships with peers.

They also:

- have a restricted range of interests and activities, and tend to have a detailed knowledge of these narrow areas (e.g. knowing all about dinosaurs, trains, bus timetables or weather patterns)
- have fixed rigid rituals and routines that they follow and become extremely distressed if not able to do so (e.g. bedtime routines, having coffee in the same cafe each morning).

What social difficulties do they have?

People with Asperger's syndrome usually want to have friends and be part of social networks, but their difficulties in knowing how to behave appropriately and in reading the emotions and responses of others often lead to teasing, bullying, exploitation, ostracism and social isolation.

The narrow focus of their interests, and their desire to discuss these interests at length with little understanding of how others are responding, can lead to avoidance or rejection by others.

Their distress at interruption of their routines and rituals can lead to outbursts of anger that may seem unpredictable and unwarranted to others.

What communication difficulties do they have?

There is usually no significant delay in the child developing speech and many will have quite advanced verbal abilities for their age. There can, however, be limitations in how much they understand of the content and implications of what they say. They have difficulty comprehending and manipulating abstract concepts and the abstract use of language, for example in idiom, metaphor, humour and sarcasm. They may also be unaware of, or confused by, the complex interplay of language content, tone of voice, facial expression, body language and social context that comprise a communication message, and so may misinterpret what is said or be misunderstood by others.

What is their intellectual ability?

People with Asperger's syndrome generally have normal intellectual ability. There are particular patterns seen on psychometric testing that help in making a diagnosis. They usually demonstrate an ability to memorise organised data but do not have good powers of imagination.

How is it diagnosed?

There are no specific blood or imaging tests. The diagnosis is made after assessment and testing by skilled paediatricians, psychiatrists or psychologists.

What is the cause?

The precise cause of Asperger's syndrome is not known, but genetic causes are thought to be most likely in the majority of cases. No specific genetic markers have yet been found.

What is the treatment?

There is no cure for Asperger's syndrome, but there is much that can be done to help the child or adult and their family. A diagnosis leads to understanding and facilitates access to support groups and further sources of information. The basis of intervention is helping the person and their family and friends understand their difficulties, and to explicitly teach specific social rules, behaviours and skills as required.

► FURTHER INFORMATION

- Autism Spectrum Australia: www.aspect.org.au
- Dr Tony Attwood has written articles, presentations and books on Asperger's syndrome: www.tonyattwood.com.au
- Victorian Government Disability Online information: www.disability.vic.gov.au
- Victorian Asperger Syndrome Support Network: <http://home.vicnet.net.au/~asperger>

Bed-wetting (enuresis)

What is nocturnal enuresis (bed-wetting)?

It refers to bed-wetting at night in children (or adults) at a time when control of urine could be reasonably expected.

What is normal?

Bed-wetting at night is common in children up to the age of 5. About 50% of 3-year-olds wet their beds, as do 20% of 4-year-olds and 10% of 5-year-olds. It is considered a problem if regular bed-wetting occurs in children 6 years and older, although many boys do not become dry until 8 years. Bed-wetting after a long period of good toilet training with dryness is called secondary enuresis.

What causes it?

There is usually no obvious cause, and most of the children are normal in every respect but seem to have a delay in the development of bladder control. Others may have a small bladder capacity or a sensitive bladder. It tends to be more common in boys and seems to run in families. Most bed-wetting episodes occur in a deep sleep, and so the child cannot help it. The cause of secondary enuresis can be psychological; it commonly occurs during a period of stress or anxiety, such as separation from a parent or the arrival of a new baby. In a small number of cases there is an underlying physical cause, such as an abnormality of the urinary tract. Diabetes and urinary tract infections may also be responsible. It does tend to run in families.

Should the child be checked by your doctor?

Yes; this is quite important, as it will exclude the rare possibility of any underlying physical problem (such as a faulty valve in the bladder) that might cause bed-wetting.

How should parents treat the child?

If no cause is found, reassure the child that there is nothing wrong, and that it is a common problem that will eventually go away. There are some important ways of helping the child adjust to the problem.

- Do not scold or punish the child.
- Praise the child often, when appropriate.
- Do not stop the child drinking after the evening meal.
- Do not wake the child at night to visit the toilet.
- Use a night light to help the child who wakes.
- Some parents use a nappy to keep the bed dry, but try using special absorbent pads beneath the bottom sheet rather than a nappy.
- Seek advice about mattress protection.
- Make sure the child has a shower or bath before going to kindergarten or school.
- Use absorbent pull-up pants.

When should you seek professional help?

Seek help if there is:

- continued bed-wetting by children aged 6 or 7 years that is causing distress

- ongoing wetting during the daytime
- bed-wetting starting after a year's dryness.

What are the treatment options?

Many methods have been tried, but the bed-wetting bell and pad alarm system is generally regarded to be the most effective. If the child has emotional problems, counselling or hypnotherapy may be desirable. Drugs can be used and may be very effective in some children, but they do not always achieve a long-term cure and have limitations.

An agent called desmopressin (Minirin), which is sprayed into each nostril at night, seems to be very effective if the alarm system is ineffective.

Bed-wetting clinics are available in major centres.

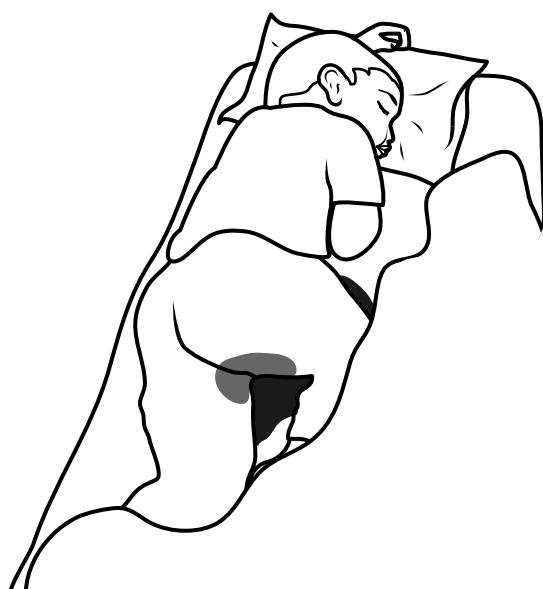
The bed alarm

There are various types of alarms: some use pads in the pyjama pants and under the bottom sheet, but recently developed alarms use a small bakelite chip, which is attached to the child's briefs by a safety pin. A lead connects to the buzzer outside the bed, which makes a loud noise when urine is passed. The child wakes, switches off the buzzer and visits the toilet. This method works well, especially in older children.

Key points

Bed-wetting:

- is not the child's fault
- rarely has an emotional cause
- gets better naturally
- nearly always clears up before adolescence
- requires a gentle, non-interfering approach
- responds well to an alarm from 7 years.



What is a birthmark?

A birthmark is any area of discoloured skin present from birth or very soon after birth and persists for at least several months. The common type of birthmark is called a naevus. The naevus is usually a collection of tiny blood vessels in the skin (called a vascular naevus) or a collection of dark pigment (called a pigmented naevus).

The three common types of vascular naevi are the 'stork mark', the strawberry naevus and the 'port wine stain'.

The 'stork mark'

The proper medical name for the so called 'stork mark or bite' is *Naevus flammeus*. It is a flat red or pink patch of dilated capillaries that appears on the nape of the neck or on the face, especially on the eyelids, the bridge of the nose and adjacent forehead.

Stork marks (sometimes called salmon patches) are very common and may occur in up to 50% of babies. They are present at birth and usually fade away over the next 6 to 18 months although the neck patches may persist well into adult life. No treatment is required.

The strawberry naevus

The proper medical name for a strawberry naevus is *haemangioma of infancy*. It is a very bright red raised area that can occur on any part of the body. At birth it is so small (it may be the size of a pinhead) that it is not noticed for a few days, then it grows rapidly for a few weeks, increasing in size up to 20 weeks in proportion to the growth of the baby. When the baby is about 6 months small white-grey areas appear in the naevus and gradually spread to eventually replace the red tissue so that the lump becomes flatter and smaller.

The naevus usually disappears substantially by the time the child reaches 4 years or school age and completely by about 8 years of age. Occasionally the naevus may bleed either following a knock or spontaneously, but applying firm pressure with a finger over a small dressing usually stops the bleeding. In most cases no treatment is required.

Sometimes if the naevus is large and disfiguring on the face or interfering with orifices such as the eye, ear or genitals, your doctor will refer the child to a specialist clinic for treatment.

The port wine stain

The proper medical term for this is *capillary malformation* because it is a patchwork of tiny swollen capillaries that appear as a purplish-red discolouration anywhere on the body, especially on the face and limbs. About 1 in 1000 babies will be born with the stain. It may not be obvious at birth and so may not be diagnosed for several weeks. With time the stain becomes raised and thicker but it does not grow in size except in proportion to body growth. It usually persists into adult life and remains unchanged although it may fade slightly. In the past it was difficult to treat or remove and cosmetic creams were used to conceal the stain. Now it can be treated (best in the first 2 years) by specialised laser treatment.

Pigmented birthmarks

A pigmented birthmark is a discolouration on the surface of the skin due to a dark pigment called melanin. It is usually seen as a flat coffee- or black-coloured spot. The correct medical term is a *melanocytic* (or pigmented) naevus or mole. One child in 100 is born with a pigmented birthmark. Nearly all children will develop them after the age of 2 and it must be emphasised that they are usually completely harmless. As a rule the birthmark becomes more raised and perhaps hairy as the child grows.

Generally there are only one or two small spots but in some cases the spots can be many or very large. Some infants are born with pigmented birthmarks that have hair growing out of them. In some older children a halo of paler skin may appear around it which is called a *halo naevus*. The mark may become itchy or swollen from time to time.

Pigmented birthmarks are generally permanent but can be removed by plastic surgery if necessary for cosmetic reasons. This is best done before starting school.

Mongolian blue spots

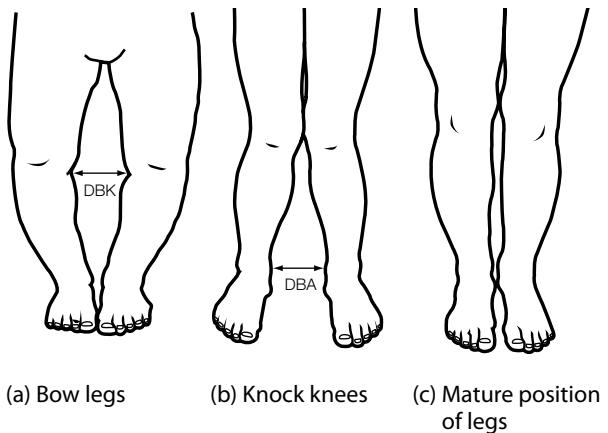
These are pigmented bluish irregular flat patches usually found over the lower back, sacrum and bottom. They can be mistaken for bruises but are harmless and become less obvious as the child grows. They are more common in babies of dark-skinned parents.

Bow legs and knock knees

Bow legs and knock knees are relatively common in infants and children but are usually no cause for concern. They are stages that children pass through and it is important to remember that most legs are perfectly straight by the teenage years.

Bow legs (genu varum)

Bow legs are very common up to the age of 3 years. In fact, they are quite normal up to the age of 2 or 3. This means that when the ankles are touching the knees are apart. The bend in the legs often causes the child to walk pigeon-toed with feet pointing inwards. Bow legs usually correct themselves when the child starts walking, so much so that from about the age of 4 there is a tendency for the child to develop knock knees. Braces or special shoes do not help straighten any better than natural development.



How can you check progress?

If you are concerned about the extent of the bow legs, the problem can be monitored by measuring the distance between the knees (DBK). If this is greater than 6 cm and not improving at 4 years and older, it is advisable to have them checked by your doctor. Comparing progress can also be helped by taking serial photographs every 6 months.

Knock knees

Knock knees are also normal in children and most have these between the ages of 3 and 8 years. Running can be awkward, but improves with age.

The rule for normal 3-year-olds is:

- 50% have 3 to 5 cm between the ankles (DBA)
- 25% have more than 5 cm.

These invariably straighten nicely after 8 years.

How can you check progress?

For any concerns about the degree of knock knees, measure the distance between the ankles (DBA). It should be checked by your doctor if the DBA is greater than 8 cm after the age of 8 years and not improving. Keeping a photographic record is also helpful.

In summary

It is normal for children to have:

- bow legs 0 to 3 years
- knock knees 3 to 8 years
- legs straight by adolescence.

Bronchiolitis

What is bronchiolitis?

Bronchiolitis is a chest infection in which there is inflammation of the bronchioles, which are the smallest branches of the respiratory tree of the lungs. This results in narrowing and blockage of the small air passages with mucus, leading to a negative effect on the transfer of oxygen from the lungs to the bloodstream.

Bronchiolitis can be confused with bronchial asthma or the effects of an inhaled foreign object.

What is the cause of bronchiolitis?

It is caused by one of the common respiratory viruses, especially respiratory syncytial virus. The virus appears to have a particular tendency to target the bronchioles in infants. It is a contagious condition that is usually spread from droplets released into the air by coughing. It can also be spread by hand contact with secretions from the nose or lungs. Bronchiolitis usually occurs in the winter months.

Who gets bronchiolitis?

It typically affects babies from 2 weeks to 12 months, especially under 10 months of age.

What are the symptoms?

At first the infant usually develops symptoms of a mild common cold with a runny nose, fever and cough for about 48 hours. As the infection progresses over the next day or so, the following irritations develop:

- irritating cough
- wheezing
- rapid breathing.

These more severe symptoms last about 3 to 5 days. In a very severe episode there are:

- retractions of the chest and abdomen ('see-saw' movements)
- hypoxia (lack of oxygen)
- possible cyanosis (blue lips or skin).

What is the expected outcome?

The wheezing usually lasts for about 3 days only, and as it settles the child gradually improves. Most babies can be treated at home and are usually better in 7 to 10 days. The cough can last up to a month or so.

Does bronchiolitis recur?

It usually occurs once only but can recur. Some infants can have recurrences in the first 2 years and some develop bronchiolitis after every cold, especially if there is an underlying tendency to asthma. Some infants with

recurrent bronchiolitis may eventually develop asthma. However, most infants with recurrent wheeze will not develop asthma.

What are the risks or complications?

In some cases the infection is severe and the children become depleted in essential oxygen and fluids. Dehydration is a problem because of drinking difficulty from constant coughing. They require hospitalisation. Complications, including secondary bacterial pneumonia, are uncommon.

What is the treatment?

There is no particular medicine, including antibiotics, that cures bronchiolitis because it is a viral infection. It gets better naturally but care is required.

Home management

Milder cases (the majority) can be managed at home.

- Encourage quiet resting.
- Paracetamol is recommended for fever.
- The important issue is to keep up plenty of fluids, especially in the very young. Give 1 to 2 extra bottles a day or more frequent breastfeeds. If feeding is difficult, give smaller quantities more often.
- Ensure the home environment is smoke-free.

Hospital management

More severe cases with respiratory distress need to be admitted and given oxygen and special feeding.

When to seek help

Seek help if any of the following occur:

- worsening cough and wheeze
- poor fluid intake—refusal to feed, fewer wet nappies, less than half normal intake over 24 hours
- difficult, rapid breathing
- difficulty with sleeping
- blueness around the lips
- child generally flat and ill.

Key points

- Bronchiolitis is a viral infection in the first year of life.
- It usually gets better in 7 to 10 days.
- Antibiotics will not cure it.
- Extra fluids are usually needed.
- It usually is a once-only condition.
- Some children get recurrences over 2 years.

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Bullying of children

What are the facts about childhood bullying?

Research indicates that bullying of children is common and widespread wherever children are grouped together. It is increasing, and is prevalent in every school, with long-lasting consequences. It is interesting that 50% of targeted children told no one about it. Bullying takes many forms and is defined as ongoing deliberate physical, verbal and emotional aggression by one or more people against others.

What are the forms of childhood bullying?

Bullying is more than physical aggression as it can involve intimidation through words or behaviour. An increasing trend is for bullies to use modern technology such as SMS, email, Facebook or Twitter. It is designed to hurt, threaten or frighten the child by actions such as teasing, name-calling, ridicule, threatening, exclusion or marginalisation.

What are the effects of bullying?

Bullying not only affects the child being bullied but also the audience witnessing the anti-social behaviour. Even the bully, if unchecked and not counselled, will possibly develop social problems and have communication problems in their teen and adult years. There is evidence that child bullies and those bullied as children have the potential to become bullies in adulthood.

What are the signs to indicate bullying?

One or more of the following indicators will be present in the child:

- school phobia: sham sickness and other excuses to stay at home
- being tense, tearful and miserable after school
- reluctance to talk about happenings at school
- poor appetite
- functional symptoms (e.g. habit cough)
- repeated abdominal pains or headache
- unexplained bruises, injuries, torn clothing, damaged books
- lack of a close friend; not bringing children home
- crying during sleep
- restless sleep with bad dreams
- appearing unhappy or depressed
- unusual changes in behaviour and manner
- unexpected irritability and moods; temper outbursts
- poor or deteriorating school performance
- school truancy.

Why are children bullied?

The perpetrators tend to pick on anyone around them but seem to target those who seem vulnerable and easy to hurt. This includes those children who:

- are regarded as 'nerds' or 'bookworms'
- are regarded as the 'teacher's pet'
- struggle with schoolwork in general
- are different, whether in appearance or because they have a disability
- are poor at sport
- are loners
- lack social skills
- are 'nervy' or anxious types
- are smaller or weaker
- are from a very different social or cultural group.

How to tackle the problem: advice for parents

Things that parents can do include the following.

- Avoid negative comments such as calling the child 'soft', 'a sook', etc.
- Emphasise positives in the child—build their confidence.
- Listen to the child and be empathetic to their feelings and concerns.
- Help the child to work out ways of avoiding the bullies and situations.
- Encourage the child to ignore verbal teasing.
- Avoid being overprotective or taking everything into your own hands.
- Counsel that the bullying is not the child's fault.
- Encourage distractions such as seeking different compatible friends or groups and different activities during and after school.
- Supervise the child's use of the electronic media and mobile phones.

Make a list of the facts and approach the school authorities (preferably with a friend or another affected parent) in a very businesslike manner. Be prepared to name names and the circumstances—places, times and methods. Be persistent until the problem is adequately attended to.

Getting help

The following are possible people or agencies where you can get help:

- your general practitioner
- your child's school
- Kids Help Line, www.kidshelp.com.au
- Parentline, phone 132 289
- a community youth worker.

Chickenpox (varicella)

What is chickenpox?

Chickenpox (varicella) is a mild disease, but is highly contagious and in adults it may result in severe illness. It is caused by a virus that can also cause shingles (herpes zoster). Recovery occurs naturally. Chickenpox affects mainly children under the age of 10.

What are the symptoms?

General

Children are not very sick, but are usually lethargic and have a mild fever. Adults have an influenza-like illness.

The rash

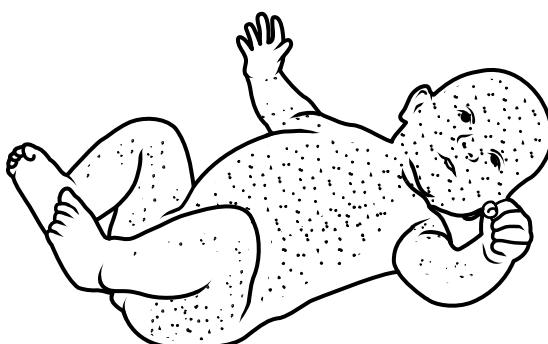
The pocks come out in crops over 3 to 4 days. At first they resemble red pimples, but in a few hours these form blisters that look like drops of water. The blisters are very fragile and soon burst to leave open sores, which then form a scab and become dry. They can be very itchy.

The site of the rash

The pocks are concentrated on the chest, back and head, but spread to the limbs. Do not be alarmed if they appear in or on the mouth, eyes, nose, scalp, vagina or penis.

How infectious is chickenpox?

The disease is very infectious and can spread by droplets from the nose and mouth or by direct contact with the 'raw' pocks. Patients are infectious for 24 hours before the pocks erupt and remain so until all the pocks are covered by scabs and no new ones appear. The incubation period is about 12 to 21 days, and so the disease appears about 2 weeks after exposure to an infected person. After recovery, lifelong immunity can be expected.



Typical spread of chickenpox

What are the risks?

It is usually a mild illness with complete recovery, but rarely encephalitis and pneumonia occur. Infection of the spots

can occur. A severe reaction occurs rarely if aspirin is used in children.

Scarring

Most people worry about this, but usually the spots do not scar unless they become infected.

Pregnancy

If chickenpox is acquired in the first 20 weeks of pregnancy or at the time of delivery, the baby is at risk. A concerned pregnant woman should discuss this with her doctor.

Exclusion from school

Children should be kept at home for 7 days or until all the pocks are dried and covered by scabs. At home it would be sensible to expose other children to the infected person so that the illness can be contracted before adulthood, but take care not to expose people with immune deficiency disorders to the child.

What is the treatment?

- The patient should rest in bed or move around quietly until feeling well.
- Give paracetamol for the fever. (Avoid giving aspirin to children.)
- Daub calamine or a similar soothing lotion to relieve itching, although the itch is usually not severe. Solugel is an effective preparation.
- Avoid scratching; clean and cut fingernails of children. Put on cotton mittens if necessary.
- Keep the diet simple. Drink ample fluids, including orange juice and lemonade. Give regular sips of water and consider icy poles.
- Daily bathing is advisable, with sodium bicarbonate added (half a cup to the bath water) or with Pinetarsol soap. Pat dry with a clean, soft towel; do not rub.
- Antihistamines are sometimes used if the itch is severe.

Use of antiviral drugs

These are usually reserved for adolescents and adults with a severe eruption and should be started during the first 3 days of the rash (preferably day 1). In general, they are not used in the very young and in those who are not ill or have very few spots.

Vaccination

A vaccine against chickenpox is now available, and is usually given after 12 months of age in children (usually at 18 months). Ask your doctor for information.

Child accident prevention in the home

In the kitchen

The most dangerous place for children is in the kitchen—poisons and burns are the dangers. Put all spray cleaners, kerosene, pesticides, rat poison and so on out of children's reach, and keep matches in a childproof cupboard.

Electric jugs with cords dangling down are very dangerous, and a cup of tea is just as hot as boiling water. Never drink anything hot while holding a baby, or pass anything hot over a baby's head or body. Do not allow saucepan handles to stick out into the kitchen from the top of the stove. Do not use tablecloths. Always put hot food and drinks in the centre of the table.

Preschool children can easily choke on peanuts and small hard foods. Don't leave button (lithium) batteries lying around.

In the bathroom

Poisons and burns are also the main bathroom hazards, but children do drown in baths. Run cold water before hot into children's baths and always test the water temperature before the child gets in. Never leave children unattended in a bath.

Tablets and medicines may be fatal for children: store tablets and medicines in a childproof place and destroy all leftovers. Toilet cleaners and deodorants also should be locked away.

In the playroom

Any object smaller than a 20-cent piece may choke a child: there should be no beads around or small removable parts on toys. Keep jars containing small items such as buttons out of reach. Do not pin dummies to clothing; tie them on instead.

In the bedroom

Remove the plastic cover from a new mattress, remove the bib before the baby goes to sleep, and never leave a baby unattended on the bed or table.

Check children's clothes for fireproof materials and choose the safest garments. Select close-fitting clothes; ski pyjamas are safer than nighties; tracksuits are safer than dressing gowns.

In the yard

Insecticides, weed-killers, fuels, paints, paint strippers and all garden products should be labelled and stored away from children. They should never be stored in old drink bottles. Children will crawl and fall over veranda edges and steps unless these are fenced off.

Short stakes in the garden should be removed, and keep children inside while mowing the lawn. Do not leave ladders around.

In the pool

Five centimetres of water in a pool can drown a toddler. A pool not in use should be made safe from wandering children—at least covered and preferably fenced off—and children should swim only with adult supervision. Keep pool chemicals, especially acid, locked away.

In the car and on the road

Place your child in the car first, and then walk right around the car before reversing down the drive. All children should be placed in approved child restraints, even to be driven just around the corner.

Train your children to sit in the back on the passenger side so that they get out on the kerb.

In general

Floor-to-ceiling glass doors and windows should have two stickers on them (one at your eye level, the other at toddler eye level) to prevent people walking through.

False plugs should be inserted into all power points that are not in use, especially those within toddlers' reach.

Bar radiators and children do not mix. Any type of fire should have a guard around it.

Remember

- Prevention is so much better than cure.
- When you are upset about something it is easy to forget about your child for a moment, so be doubly careful when you are having an 'off day'. Prepare your house now, and good habits will save lives and prevent tragedy later.
- Buy a bottle of syrup of ipecac and write your doctor's telephone number beside your telephone for rapid action should your child swallow something dangerous. Know the local Poisons Information Centre telephone number.
- Your friends' and relatives' homes may not be as safe as yours.

Circumcision

Who gets circumcised?

Circumcision is performed on baby boys for a number of reasons, but mainly because it is demanded or requested by their parents, often for religious or cultural reasons. It is a routine ritual in some religions or cultures, but in other societies parents tend to be uncertain about the decision to circumcise and may worry a lot about it. It is a controversial issue. Some parents want the operation so that the child can be just like his father. In older boys and some adults, circumcision may be necessary for medical reasons, but this is quite uncommon. Some people argue (and there is evidence from some African countries to support this) that it protects against the spread of HIV and other sexually transmitted infections and also reduces the risk of urinary infection.

Why are doctors generally against circumcision?

A policy statement from the Paediatrics and Child Health Division of the Royal Australian College of Physicians does not generally recommend routine circumcision, but says that parental choice should be respected. Doctors may argue that it is unnecessary on medical grounds and any unnecessary operations should be avoided. Any operation carries a risk of complications and some, such as bleeding, can occur during circumcision. The foreskin has a protective function for the delicate glans (tip) of the penis, and many doctors see this as an important feature of the natural order of the human body.

In Australia today, less than 10% of boys are circumcised.

When can the foreskin be fully pulled back?

The foreskin of all newborn babies is tight. As time goes by the foreskin frees up so that by the age of 5 years it can usually be fully retracted. It is not worth trying too hard

before this age. When it is pulled back, it is advisable to gently wash away the cheesy material that has built up. If it is not possible to fully pull back the foreskin by the age of 10, it is worthwhile consulting your doctor. As a rule the foreskin should only be retracted by its owner!

Who needs circumcision?

In some boys the foreskin may be very tight (this is called phimosis) and prone to infection. Sometimes an infection can cause the skin to become too tight. This leads to a very small opening, which can cause problems when passing urine (e.g. dribbling or spraying). Redness and discharge as well as pus when passing urine indicate infection. This may well mean that circumcision will be necessary. However, one or two attacks do not mean circumcision is essential. Rarely the foreskin cannot be pulled back easily (and may get stuck) in some older boys, and this may be a reason for circumcision.

The decision to circumcise

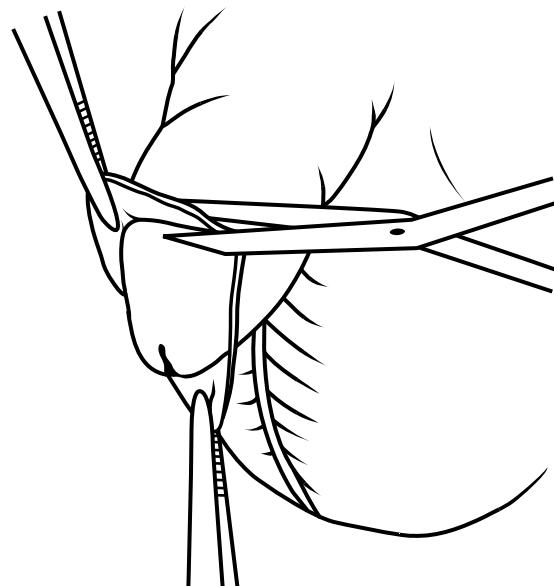
It is important to weigh up the pros and cons for circumcision and then discuss it with your doctor. Doctors usually advise against operating on newborn babies and point out that there is no hurry to operate because it is best performed when the baby is not wearing nappies.

Key points

- Routine circumcision is not recommended.
- It is best avoided on newborn babies.
- It should be considered when there is:
 - very tight foreskin
 - recurring infection of the foreskin
 - difficulty in passing urine
 - foreskin that cannot be pulled back easily.



Tight foreskin

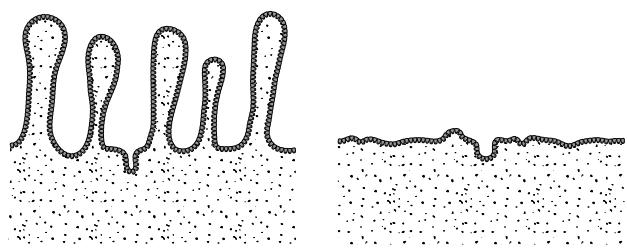


Method of circumcision

Coeliac disease in children

What is coeliac disease?

It is a hereditary disorder of the small intestine caused by a sensitivity to gluten in food. Normally the lining of the small intestine has a fluffy velvety texture but with coeliac disease it becomes smooth and flat. This reduces its ability to absorb nutrients including sugars, proteins, vital minerals and vitamins from food. The intestine simply cannot tolerate gluten in food because the gluten damages its lining. The exact reason is unknown. The condition is also called gluten enteropathy and non-tropical sprue.



Appearance of lining of normal intestine

Appearance in coeliac disease

What is gluten?

Gluten is a type of protein present in most grains, especially in wheat and rye and also in barley and oats. It is present in most of our breakfast cereals.

Who gets the disorder?

Coeliac disease is a relatively common condition that seems to affect mainly people of European descent, especially those of Celtic origin. Children usually develop it between 9 and 18 months of age following the introduction of solids into the diet. However, the onset of the disorder can be delayed and it can occur at any age. The symptoms can come on slowly, perhaps over years, making early diagnosis difficult. It affects 1 in 100 people.

What are the symptoms?

In some children there are no symptoms and when present they vary from one person to another. The problem can be dormant for years.

Symptoms commence within a few weeks of cereals being started in the baby's diet. These include:

- failure to gain weight (or even loss of weight)
- abdominal pain
- poor appetite
- diarrhoea
- constipation (in some)
- loose, pale, bulky, bad-smelling faeces
- passing a lot of wind

- swollen, 'bloated' abdomen
- mouth ulcers
- nausea and vomiting
- retarded growth
- lethargy
- irritability.

What are the risks?

Generally it is not a serious disorder when diagnosed early but otherwise can have serious consequences. Children can have stunted growth (which can be permanent) if not treated and have an increased risk of infection. Both adults and children can get anaemia due to the poor absorption of nutrients, especially vitamins.

How is it diagnosed?

Special blood tests can give a strong clue to the diagnosis. However, the key test is a biopsy of the lining of the small intestine, which is done under general anaesthetic using a flexible endoscope. This shows the flat lining of the intestine, which is essential for diagnosis.

What is the treatment?

There is no cure for coeliac disease but it can be controlled. The treatment is by a special diet, which is needed for the person's lifetime. It excludes gluten—no wheat, barley, rye and oats. This allows the bowel lining to recover. In children the response can be dramatic. Avoid foods that are obvious (e.g. bread, flour and oatmeal) and those that are more subtle (e.g. dessert mixes, ice-creams, many processed foods and confectionery). Otherwise, have a diet high in complex carbohydrate and protein and low in fat. It is important to get the advice of a dietitian. A low-lactose diet may be advised for a short period.

Forbidden foods

- Standard bread, pasta, crispbreads, flour
- Standard biscuits and cakes
- Breakfast cereals made with wheat or oats
- 'Battered' or bread-crumbed fish, chicken, etc.

A gluten-free diet is not necessarily dull. Supermarkets now sell many tasty products, including special bread and biscuits made from gluten-free flour. These are labelled 'gluten free'. Breakfast cereals containing rice and maize (corn) can be eaten. With this special diet there is a gradual improvement in abdominal swelling and muscle bulk.

Any iron and vitamin deficiency should be corrected with tablets—ask your doctor.

Other considerations

There is no restriction to general activities. It is useful to contact a coeliac disease support organisation such as the Coeliac Society in your state.

What is croup?

Croup is a common viral infection of the upper airway at the level of the throat, namely the voice box (larynx) and windpipe (trachea). It is a special problem in children, who normally have narrow air passages, and usually occurs from 6 months to 3 years of age but can occur up to 6 years or so. The younger the child, the more susceptible he or she is to croup. It tends to occur in the winter months.

What are the symptoms?

A harsh, 'barking' cough and noisy breathing are the main symptoms. Croup usually begins as a normal cold, followed by a sore throat, hoarse voice and fever. The cough, which is dry, hollow sounding and 'barking', is very characteristic. A stridor (a high-pitched wheezing or grunting noise with breathing) may develop, and this is a serious sign.

Attacks of croup usually occur at night, causing the child to wake up with a fright and a harsh, brassy cough or stridor. The symptoms are worse if the child is upset and may last for 3 or 4 days, but the first 1 or 2 days are the worst.

What is the danger?

Croup is usually a mild infection and settles nicely; however, in younger children it can sometimes cause complete airway obstruction, which is rapidly fatal. These children need to be in hospital to have specialised treatment and occasionally an airway tube inserted.

What is the treatment?

Humidified air

It is important for you to stay calm and keep the child calm by comforting them on your lap or wrapping them in a blanket (if it is cold) and carrying them outside, especially if the atmosphere is humid. The traditional method of using steam (danger of burns) and vaporisers is no longer favoured by most doctors. However, moist air does help. You can increase the moisture in the air at home by allowing the bathroom to steam up (not excessively) and nursing the child in the room.

Treatment tips

- Give the child paracetamol for fever.
- Offer frequent drinks.
- Antibiotics will not help, because croup is caused by a viral infection; however, they are used for any bacterial infection that may develop with croup.

- Stay by the child's bedside until the child settles.
- Have the child propped up in bed or lying on a few pillows for support. Watching television can help the child relax.
- Wrapping the child in a blanket and walking around outside may help the symptoms to settle.

Medication

The modern method is to give the child steroids (cortisone) by mouth or by spray for the more troublesome attacks where stridor is a feature.

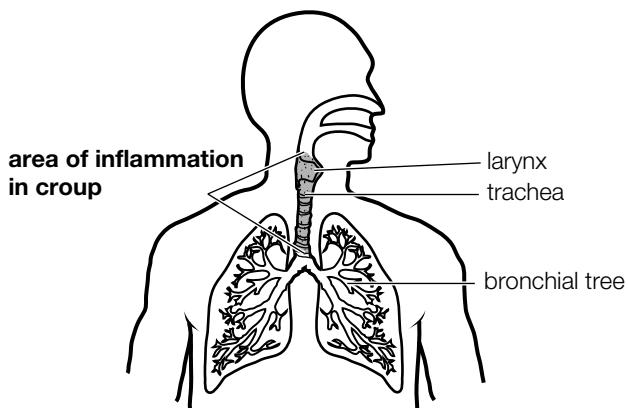
When should you seek immediate medical help?

Call your doctor or take your child to hospital urgently if:

- the stridor gets worse and is present when resting or sleeping
- the breathing becomes very difficult or noisier
- the child becomes blue and pale
- the breastbone of the chest sucks in on breathing
- the child is floppy and dribbling
- the child becomes very restless or irrational
- the child looks sick and you are very concerned.

Key points

- Croup is worse at night.
- Keep the child calm.
- Moist air is helpful.
- Croup can be dangerous.
- Get help if you are concerned.



Crying baby

'All noise at one end and no sense of responsibility at the other' is an old saying about infants. However, crying is an important expression to develop a proper interaction between the baby and parent or carer.

What is normal crying?

During the first few weeks, the average baby sleeps a lot and when awake cries loudly and often, usually without tears. The average baby cries or fusses 3 hours a day, reaching a peak at 6 weeks of age. From 6 weeks onwards, the baby has some wakeful periods without crying, and by 6 months spends 3 to 4 hours a day playing and gurgling without crying.

What is excessive crying?

Crying is excessive when it lasts for long periods when the baby should be sleeping or playing. It appears to be more common with the first baby and is aggravated by parents getting angry with the baby.

A checklist of common causes

- Hunger
- Wet or soiled nappy
- Teething
- Infant colic
- Loneliness or seeking attention
- Infection
- Reflux, which causes inflammation of the oesophagus (oesophagitis)

You should keep these problems in mind when you check your crying baby. However, much of the crying has no specific causes.

Feeding problems and hunger

The main feeding problem that causes crying is underfeeding. If so, the baby will be slow in gaining weight and may pass small, firm, dark-green motions. It is important to check this with your doctor or infant welfare nurse.

Passing urine or wet nappies

Wet or dirty nappies may cause discomfort to babies, and so this needs to be checked. Do not fall for the old trap of thinking that passing urine is painful for the baby. It is worth remembering that crying can cause the baby to pass urine.

Teething

Babies usually cut their first teeth between the ages of 6 months and 2 years. The gum is often swollen and sore at

the spots where the tooth erupts. This discomfort can make the baby cry, but it does not usually last for longer than a week.

Infant colic

This is one of the most common causes of unexplained gusty crying in an infant. It is a distressing but harmless problem that some babies develop from as early as 1 to 2 weeks of age and lasts until 12 to 16 weeks. It typically develops in the late afternoon and early evening and lasts for about 3 hours in a day and continues for at least 3 weeks.

Loneliness

Some babies may cry because they feel lonely and are looking for comfort and attention. If the baby stops crying when picked up, the cause may well be this lonely feeling.

Infections

Infections are not all that common in infants but will be diagnosed by your doctor. Examples of such infections are a respiratory tract virus, urinary tract infection, gastroenteritis and middle-ear infection. A middle-ear infection, which can cause much distress, may be indicated by a fever, running nose and the baby pulling at his or her ear.

Reflux oesophagitis

Reflux needs to be treated with attention to feeding methods and perhaps thickening of foods. If inflammation of the oesophagus is present, medication can be effective, for example antacids or proton pump inhibitors or H₂-receptor antagonists.

What should be done?

Simply check out and attend to these common causes. It is important to understand that these crying episodes are not the mother's (or carer's) fault and that the mother needs help to allow her to rest and get over the birth. It is common for some mothers to feel a failure, but nothing could be further from the truth. These crying periods do not usually last very long. A proven successful strategy by the paediatrician Dr Harvey Karp is the 'Rule of five Ss':

1. Swaddling: firm clothing, not too loose
2. Lie baby on Side or Stomach
3. Shush, that is 'Sshhushing' as loud as they cry
4. Swing them: sway them from side to side
5. Sucking: nipple, teat or dummy

Seek advice from your doctor if you are worried and cannot work out the cause or remedy. You must report any unusual symptoms.

Down syndrome

What is Down syndrome?

Down syndrome (also known as trisomy 21) is a genetic or hereditary disorder in which the affected person has an extra chromosome in each cell. Normally we have 46 chromosomes in our genetic makeup but these people have an extra number 21 chromosome, adding up to 47. This accounts for the different physical characteristics.

What are the features of Down syndrome?

The first noticeable feature in a child is the facial appearance. The face is flat and small, the eyes slope upwards at the outer corners, the ears are small, and the tongue is large and tends to stick out.

Other features include:

- intellectual disability
- smaller than average
- poor muscle tone—floppiness
- a single crease in the palm (normally 2 to 3)
- various birth defects (e.g. heart).

What are the health risks for Down syndrome?

Down syndrome is associated with various medical problems such as congenital heart disorders, bowel abnormalities, hypothyroidism, hearing loss, cataracts, leukaemia and obstructive sleep apnoea.

How common is Down syndrome?

It is the most common genetic condition and occurs in all races and cultures at a similar rate, which is about 1 in every 800 live births. There is a greater than average risk if the mother is over 40 years or if she or the father has some rare chromosomal abnormality.

The approximate risk of Down syndrome by maternal age:

20 years	1 in 1500
30 years	1 in 900
35 years	1 in 350
40 years	1 in 85
43 years	1 in 45
45 years	1 in 30

What are the diagnostic tests during pregnancy?

Pregnant women, especially those at risk, can choose to have antenatal screening tests that indicate the possibility (only) of a baby with Down syndrome. The tests include blood tests and an ultrasound at about 10 to 13 weeks into the pregnancy. If the tests are suggestive of a Down baby,

then further invasive testing can be done to confirm this. Cells and fluid are removed from the fetus. There is a small risk of miscarriage of about 1 in 100 procedures. Support services are available for expectant parents who have received a diagnosis of Down syndrome.

What can be expected?

All those with Down syndrome experience some delay in their development and some degree of learning disability, but the delays vary between individuals. The main delays are in speech and language.

The infants reach the same developmental milestones, such as crawling, smiling and walking, as other infants but they are delayed. On the positive side the children can be actively integrated into family life because they are loving, good natured, even-tempered and responsive to interaction with family and friends. They generally need more support than most other people to achieve their potential, although the degree of support varies from minimal to considerable. However, most people growing up in a modern supportive family and society will be able to function as valued members of their communities. They often have their abilities and potential underestimated.

How should the child be cared for?

It is best to bring up a child with Down syndrome in a family. This is the most important factor in determining the outlook for the person. There are many support services to help the family. They should be referred to agencies for assessment, including hearing and vision, and to a developmental disability unit. The latter can provide advice on sexuality, especially for females, where education and support for menstrual and fertility management is important. The children can attend childcare facilities, preschools and primary and high schools along with other children. On the other hand, they can attend special schools and workshops where the staff are trained to understand and meet their needs. Adults with Down syndrome can attend post-school training with the objective of participating in the workforce and eventually leading full lives as productive and valued members of the community.

Where to get help

There are many sources of help and care, including:

- your general practitioner
- your local community health centre
- National Association for Down syndrome in your state
- genetic support network in your state
- Association for Children with a Disability.

Dyslexia and other SLDs

What is a specific learning disability (SLD)?

It is an unexpected and unexplained condition, occurring in a child of average or above-average intelligence who has a significant delay in one or more areas of learning. SLDs are more common than realised and affect about 10% of children.

What learning areas are affected?

- Reading
- Spelling
- Writing
- Arithmetic
- Language (comprehension and expression)
- Attention and organisation
- Coordination
- Social and emotional development

What causes general learning difficulties?

General learning difficulties have many causes, including deafness, immaturity, intellectual handicaps, absence from school, poor teaching, visual handicaps, chronic illness, head injuries, meningitis, language disorders, autism, environmental and emotional disadvantages and SLDs.

What causes SLDs?

SLD is really a descriptive term. The primary cause is unknown. There may be multiple subtle factors causing the SLD.

How are SLDs diagnosed?

If the problem is not picked up by parents, any undisclosed learning problem will soon be picked up in the classroom. Sometimes the disability is not picked up until later (from the age of 8 onwards), when more demanding school work is required. SLDs vary from very mild to quite severe. Speech delays, reading problems and calculation problems are among the first signs. The child will then be assessed medically, including his or her hearing and vision. If a physical problem such as poor vision can be detected, the child will be referred to a specialist in this area.

What effects do SLDs have?

Apart from having delayed learning at school, many children with SLDs have difficulty in coping with life in general. They are subject to ridicule by other children and tend to

develop a poor self-image and low self-esteem. The problem may manifest as a behaviour disorder. Both the child and the family suffer, especially if the cause is not clear to them.

What is dyslexia?

Dyslexia is an SLD with reading. A dyslexic child has below-average reading skills yet has no physical problems and has a normal IQ. Other SLDs may be present, particularly with spelling, writing and clear speaking.

Dyslexia is a term derived from the Greek for 'difficulty with words'. It was originally called 'word blindness'.

What are the features of dyslexia?

The two main features are reading and spelling difficulties because the child confuses certain letters whose shapes are similar but have different positions, perhaps mirror images. Examples include confusing b with d and p with q. This means that the child cannot properly use and interpret the knowledge that he or she has acquired.

Characteristics include:

- a reluctance to read aloud
- a monotonous voice when reading
- following the text with the finger when reading
- difficulty repeating long words.

The above features, of course, are seen in all or most learners, but if they persist in a bright child dyslexia should be considered. The most important factor in management is to recognise the problem, and the earlier the better.

What can be done?

It is important to build the child's self-esteem by explaining the problem carefully, removing any sense of self-blame and encouraging efforts towards progress. Parents can play an important role in building up their child's self-esteem and in helping learning. Parents are the most important teachers.

Children with SLDs are usually referred to an experienced professional or to a clinic such as a dyslexia clinic for assessment. The management may involve a clinical psychologist, an audiologist, an optometrist or a speech pathologist. A specific method of correcting the problem and promoting learning will be devised. It is also worthwhile seeking the help of a support organisation.

Earache in children

What causes earache in children?

The most common cause of earache is acute infection of the middle ear (*otitis media*), which usually follows a nose or throat infection such as the common cold.

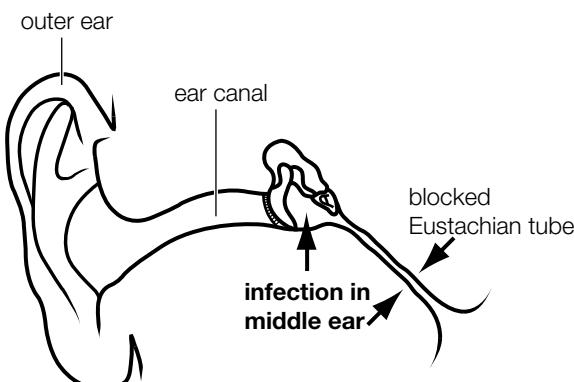
Another common cause, especially in older children, is infection of the outer ear (*otitis externa*) caused by fungi or bacteria that infect ears blocked with wax, water and sweat. This often occurs after swimming, and so is more prevalent in summer.

An important cause to consider is a foreign body in the ear (e.g. an insect or the child poking something down the ear). This could even cause a ruptured ear drum.

Middle-ear infection (*otitis media*)

What is the cause?

Viruses and bacteria can travel up the short and narrow Eustachian tube, which connects the middle ear to the back of the throat. When this tube becomes congested and blocked from a cold, the germs get trapped in the middle-ear cavity and cause a painful infection, often with infected fluid (pus). The younger the child, the more likely is infection. The two most common age groups appear to be 6 to 12 months and 5 to 6 years (when school is commenced).



Otitis media

What are the symptoms?

The main symptoms are:

- earache, often intense pain
- irritability
- frequent rubbing or pulling of ear
- fever or general feeling of being unwell
- usually a blocked or runny nose.

There may also be:

- poor hearing
- a discharge from the ear.

What should you do?

- Place the child in an upright position with pillows or by nursing in your lap.
- Give painkillers such as paracetamol. It is very important to relieve pain.
- Give a decongestant to free the Eustachian tube, preferably an oral one but nose drops or spray can be used. Only use this if there is nasal congestion and for 3 days only.
- Contact your doctor, who may prescribe an antibiotic after inspecting the ear.

Glue ears

It is advisable to have your child checked after a middle-ear infection to see that the ear has returned to normal. Sometimes a 'glue ear' (*secretory otitis media*) follows acute otitis media. This is the build-up of a sticky glue-like fluid that gets trapped behind the drum when the fluid cannot drain out of the Eustachian tube.

What are the symptoms?

- Deafness (usually partial only) and inattentiveness
- Earache (usually mild)

What is the treatment?

Glue ears usually get better naturally but can be helped with decongestant medicine and strong nose-blown exercises. If possible, get the child to pinch the nose and blow out hard against the back of the hand. Sometimes it is necessary to operate to drain the sticky fluid out of the ear by placing small drainage tubes (grommets) through the drum.

Encopresis

What is encopresis?

Encopresis is the involuntary passage of stool into the underwear (or a place other than the toilet) on a regular basis in a child over 4 years of age. Sometimes the child regularly starts soiling his or her underclothes, after having previously been well toilet trained. Children do not usually have complete bowel control until at least 2½ years of age. About 1 to 2 children in 100 have the problem and it is 3 times more common in boys than in girls.

What are some of the features of encopresis?

- Bowel movements occur spontaneously into the underwear.
- The stools may be fully formed or partly formed.
- The soiling has to occur for at least 1 month.
- The child appears to have no control or warning.
- The abdomen may swell.
- Enuresis (bed-wetting) is often present.

What are the causes?

The most common cause is constipation with false diarrhoea around the clogged-up bowel. This may follow a period of resistance to or embarrassment about using toilets at kindergarten or school, on camping trips or outdoors. School bullying can be a factor.

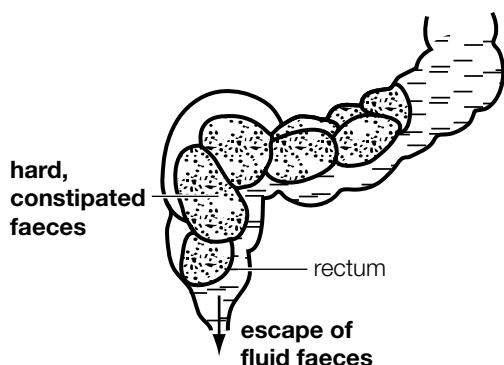
Sometimes the cause is not apparent. It may develop after a period of being too preoccupied with activities, resulting in bad habits with going to the toilet.

Some apparent causes are:

- a serious illness
- a poor diet, leading to constipation
- painful bowel movements (e.g. an anal fissure)
- stress or emotional upset (e.g. parental separation)
- child abuse
- negative reaction to parents' obsession about toilet use.

What is false (spurious) diarrhoea?

This is a trick played by the body. It occurs when, after a period of constipation, large amounts of hard faeces build up in the lower bowel and rectum. The fluid faeces from



False (spurious) diarrhoea

higher up tend to trickle past the obstruction and soil the underwear. The child is unaware of this and control has been lost because the usual anal reflex does not occur.

Parents often think their child has diarrhoea when the problem is really constipation. The doctor can diagnose it by examining the rectum.

What can be done?

Role of parents

- A concerned, understanding and supportive approach is essential.
- Be sensitive to other stresses in your child's life.
- Do not shame or punish the child for 'dirty habits'.
- Ensure your child is not subject to any abuse.
- Approach toilet training sensibly—have realistic expectations. However, a structured toilet program may be advisable for your child; for example regular sitting on the toilet for 5 minutes 3 times a day (after each meal). A too strict or poorly supervised program does not work well.
- Provide a good normal diet with regular meals, and adequate fluids.

Bowel clean-out program

The bowel needs to be emptied by whatever means necessary. Your doctor will advise on laxative medication required to restore the bowel to its normal state, especially if constipation with false diarrhoea is found to be present. It will involve the use of a combination of laxatives, stool softeners, enemas (mild) and suppositories. It is usual to start with a laxative such as lactulose or Movicol, which is then continued each day. A lubricant or softener such as a paraffin oil preparation can be added. Encourage your child to follow the structured toilet routine (5 minutes, 3 times a day).

The laxative and softener therapy program will be continued until the problem settles, which takes at least 6 to 12 months. Sometimes referral to a specialist or special clinic may be necessary.

Other pointers for parents

- Get children 5 years and older to clean up themselves.
- Ask for the teacher's cooperation.
- Do not return to nappies.
- Do not allow siblings to tease the child.
- Provide incentives (e.g. time out with parents).

Remember

- Praise effort and success.
- Do not blame, shame or punish for accidents.
- Do not overreact.
- Check and correct any stresses.
- Seek the cooperation of all contacts.
- Provide a high-fibre diet with plenty of fluids.
- Establish good toilet habits.

Febrile convulsions

What are febrile convulsions?

Febrile convulsions are fits or seizures that occur in young children when they have a high fever (a fever greater than 38°C). A convolution (fit) is a sudden event when the child is 'not quite with it', starts to jerk or twitch and may have difficulty in breathing.

What causes them?

They occur only when the child has a high temperature. The growing brains of little children are more sensitive to fever than are more mature brains, and when the normal brain activity is upset a fit can occur.

The fever is caused by an infection, which is usually a viral infection and often is not obvious. A simple viral infection that would give an adult a heavy cold is the type often responsible. Sometimes the doctor may find an infected ear, throat or bladder.

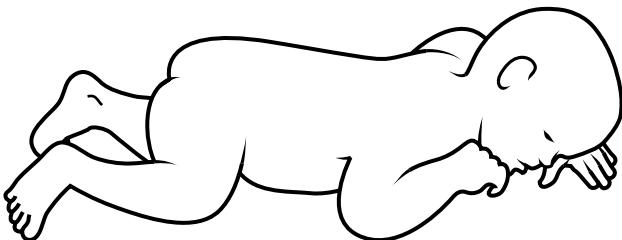
What is a rigor?

A rigor or a chill is an episode of uncontrolled shivering that lasts for 10 to 20 minutes. It may be associated with shaking and teeth chattering. A rigor is sometimes mistaken for a febrile convolution.

Who gets febrile convulsions?

They are common and can affect any normal child. About 5 in every 100 children will have a fit from a fever. They tend to run in families.

They usually occur in children from 6 months to 5 years of age, the most common age range being 9 to 20 months; they usually stop by 6 years of age.



The correct positioning of a child during a fit

What are the risks?

Febrile convulsions (whether one or several) in normal children do not usually cause brain damage or epilepsy. Most children are absolutely normal later on. One problem is that about 25 to 50% will go on to have another seizure.

How do you manage a convolution?

1. Place the child on his or her side, chest down on the floor, with the head turned to one side. Never lie a fitting or unconscious child on his or her back. Do not force anything into the child's mouth or shake, slap or restrain the child. The primary concern is to keep the child's airway open.
2. Move the child away from harmful objects, such as furniture with sharp corners and glass objects, and place something soft under the head.
3. Undress the child to singlet and underpants to keep the child cool.
4. Obtain medical help as soon as possible. Ring or go to your local doctor or to your nearest hospital. Even if the fit stops, have your child checked.
5. It is important to stay calm.

How do you help prevent another episode?

Because some children have further febrile convulsions, it is important to manage any fever as soon as it is noticed. Undress the child down to singlet and underpants, keep the child cool, and give fluids and paracetamol mixture.

Key points

- Febrile convulsions may occur again.
- They usually occur from 6 months to 3 years of age.
- They cause no long-term problems.
- Complex investigations should be avoided.
- They do not cause death, brain damage or epilepsy.
- They stop by 6 years of age.

Feeding your baby

Starting rules

- It is best to breastfeed for the first 12 months.
- There are benefits for the baby to receive breast milk rather than formula.
- Cow's milk-based formulas should be used if the baby is not breastfed.
- Fresh cow's milk should not be started until 12 months.
- In the first 3 to 4 months 'baby knows best'.
- Formula choice for healthy term infants can be based on cost.
- The only reliable measure of adequate nutrition is weight gain.
- Your baby needs only breast milk or formula for the first 5 to 6 months.
- It is good to introduce soft solid foods from 5 to 6 months but introduce them slowly.
- Babies don't need teeth to chew soft foods.

When to start solid foods?

Solids should be gradually introduced at about 5 to 6 months, one at a time. Food should never be forced but introduced slowly.

Your baby may show signs of being ready for this by behaviour, such as wanting to put things in the mouth, more frequent feeding and an interest in food being eaten by others.

Solids should be offered after a feed or between feeds of milk. Breast milk or formula remains the most important food.

Examples of solid foods for beginners are:

- baby rice cereal mixed with their usual milk or cooled boiled water (best first option)
- cooked pumpkin, potato or carrot
- fruits such as banana, cooked apple or pear.

The texture should be pureed (no lumps).

Introduce a new food only after 3 to 4 days, early in the day, and check for any allergic reaction. Start with 1 to 2 teaspoons of solids and build up to 3 meals a day at your baby's own pace.

6 to 9 months

Lumpy foods can be introduced at 6 to 9 months, as by this time babies learn to chew.

From 6 months you can introduce well-cooked meats that contain iron (beef, lamb and chicken) and fish, but be sure to remove bones and gristle. The texture should be mashed or finely chopped.

Other foods for this age include:

- milk-based foods (e.g. custard, yoghurt)
- egg yolk (delay egg white until 9 to 12 months)
- legumes (e.g. baked beans).

Solids can be offered before a drink to develop a yearning for solids.

Note: Don't cook with salt or add sugar to fruit.

9 to 12 months

By 9 months more solids should be eaten each mealtime and the milk should be gradually decreased—3 to 4 breastfeeds or 600 to 800 mL of formula is sufficient.

Encourage your baby to drink from a cup rather than a bottle—a spouted cup can be used. The baby is ready for a spoon and can feed him- or herself.

You can now introduce wheat products such as pasta, bread, baby muesli and other cereals, cheese and egg (unless there is a family history of allergy). Babies are also ready for finger foods as they learn to chew, so encourage their handling of food (e.g. rusks, bread squares, finger sandwiches, fruit pieces, cheese sticks, and cooked meat such as lamb, beef, ham and chicken, and cooked fish). Introduce minced or mashed foods to encourage chewing.

Cooled boiled water should be introduced as it is better than fruit juices and cordials.

12 months onwards

You can now introduce cow's milk and more solid foods especially meats, vegetables and fruit.

Cautionary advice

Choking

Be careful—avoid nuts, whole peas, popcorn, raw and uncooked pieces of hard fruits and vegetables (e.g. apples and carrots).

Always supervise your baby when eating, especially up to 12 months.

Cow's milk

Cow's milk should not become a main drink until 12 months of age. Babies on a cow's milk diet who eat little are prone to develop iron-deficiency anaemia (seen often from 12 to 36 months). If cow's milk is used before 9 months it should be brought to the boil and cooled before use. Milk intolerance develops in some babies.

Allergies

Be alert for allergic reactions usually seen with cow's milk, egg, soy beans, peanuts and fish. Symptoms include flushing, blotchy skin, swelling of the face, pallor and wheezing soon after eating. Diarrhoea and abdominal colic also indicate intolerance. Consult your doctor if you are concerned.

Honey

Avoid honey for babies under 12 months as it may contain bacteria.

► FURTHER INFORMATION

- The Children's Hospital at Westmead factsheets: www.chw.edu.au

Fever in children

What is a fever?

A fever is present when your body temperature is higher than normal. The normal body temperature is around 37°C, but this can vary over time. A temperature over 38°C usually indicates a fever.

What causes a fever?

A fever is usually due to an infection. Fever is your child's body's way of fighting the infection and is usually harmless. The temperature returns to normal when the infection settles. Some types of infections that lead to fever include:

- viral: about 9 in 10 children with a fever will have a viral illness; examples include common colds, flu and gastroenteritis
- bacterial: common bacterial infections include urine infections and impetigo.

What are the symptoms of fever?

Symptoms include:

- feeling hot to touch
- sweaty or clammy skin
- feeling lethargic and unwell
- flushed face
- shivering or chills
- chattering teeth (extreme).

Fever causes an increase in heart rate, breathing rate and circulation to the skin, which is the normal body response to reduce the heat caused by the fever.

Fever in children

Fever is common in children, in whom the temperature may rise quickly to 38.5°C or higher. It does not mean the child has a serious illness. It is normal for children, especially infants and toddlers, to have at least five or six episodes of fever a year.

Note: Teething does not cause fever.

When is fever harmful?

Fever itself is not harmful until it reaches a level of 41.5°C. This level is very uncommon in children. Extremely high temperatures are often due to human error, for example:

- shutting a child in a car on a hot day
- overwrapping a febrile (feverish) child.

One complication in a child is a febrile convulsion occurring typically between 6 months and 5 years of age.

The most common complication is dehydration, so drinking lots of fluids is important.

How to take a temperature

It is better to be guided by your child's overall wellbeing than to keep checking their temperature. Should you wish to take your child's temperature, this can be done simply with a mercury thermometer, which you can buy from a pharmacy. Shake down the thermometer before use. You can take your child's temperature by placing the silver end of the thermometer:

- under your child's tongue with their lips wrapped around it
- into the rectum (back passage) if your child is a young baby, but use with care

- under your child's arm with the silver bit in the armpit (this may be less accurate than other methods).

Leave the thermometer in place for at least 2 minutes before removing and reading the temperature. This will give the best reading. Remember to sterilise after use.

There are other types such as the otic (ear) thermometer. Ask your pharmacist to explain their use.

What can be done?

It is not always necessary to treat a fever. If your child has a viral illness, they are likely to get better on their own without treatment. Sometimes a doctor may advise using a painkiller such as paracetamol or ibuprofen to bring down a fever. If your child has a bacterial infection, they may need antibiotics to help fight the infection.

Home care

- Dress the child in light clothing.
- Do not overheat with too many clothes, rugs or blankets.
- Keep the child cool, but avoid draughts.
- Give the child small drinks of light fluids, especially water, often. Do not worry if the child will not eat.
- Give paracetamol syrup every 4 hours, but no longer than 24 hours without medical advice, until the temperature goes down. (Do not use aspirin under 16 years.)
- Sponging with lukewarm water for up to 30 minutes will help, especially if paracetamol is taken.
- Give the child plenty of tender loving care, with reassurance that they will soon feel well.

Note: Cooling measures such as completely undressing the child and using fans are not necessary.

Do not:

- put your child in a cold bath or in a cold draft.
- wrap them in a blanket (even if complaining of being cold).
- give aspirin to your child.

Seek medical help for the following (in children):

- severe headache or neck pain (with stiffness)
- light hurting the eyes
- repeated vomiting
- a convulsion, twitching or the child acting oddly
- undue drowsiness or difficulty waking up
- refusal to drink
- the child looking sicker
- the child develops a rash
- the child is floppy or pale
- no improvement in 48 hours
- earache or other pain
- temperature higher than 40°C
- breathing difficulty.

Key points

- Fevers fight infection.
- Fevers are common in children.
- Give them paracetamol mixture every 4 hours.
- Keep them cool.
- Keep up fluids.

Flat feet

Flat feet in children

Flat feet due to low arches are common and usually quite normal in children. Flat feet are also called 'fallen arches' or pes planus. In fact, all newborn children have flat feet. They are also common in preschool children and present in about 10% of teenagers. It is normal for parents to be very concerned but there is usually nothing to worry about. Children have low arches because they are loose-jointed and flexible so that the arch moulds to a flattened position when standing.

What usually happens with time?

When the child starts walking, he or she develops a wide stance for balance and the feet roll at the ankles. This is normal. With growth, the muscles of the ankle develop and become strong so that the foot gradually takes shape at the age of 4 and about 80% of children will develop an arch on the inside of their foot by their sixth birthday. The arch is developed by age 10.

What are the symptoms?

The typical flat foot that is flexible causes no symptoms, even in adult life. Very rarely, it may be stiff and uncomfortable and require treatment. Persistent pain and stiffness is an indication for referral to a specialist.

What is the tiptoe test?

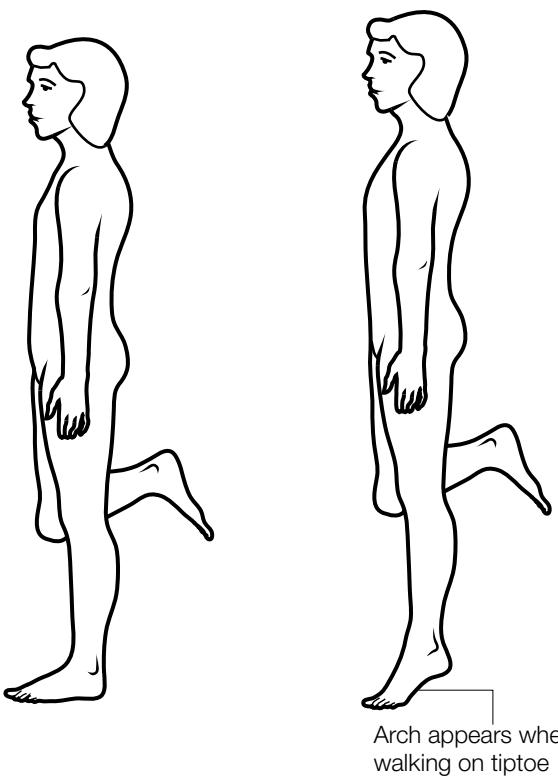
This is a simple test for the presence of an arch. The arch can be seen better when the feet are hanging in the air and even better still when the child stands on tiptoe.

Are flat feet hereditary?

Yes: there is a tendency for foot shape to be genetically determined. If one or both parents have low arches, their children tend to have low arches. It is interesting to note that the incidence is the same in populations who wear shoes and those who don't.

Do special shoe inserts help?

Studies in California have shown no benefit for flat feet from wearing orthoses or other forms of arch supports. Arches develop naturally and these inserts do not help them at all.



Arch appears when walking on tiptoe

The tiptoe test

Special modified shoes, splints, massage and other treatments have not been proved to help the feet develop any better.

What about shoes?

Special shoes are not needed. Avoid tight shoes but get shoes that are good quality and that are comfortable, flexible and protective. They should allow freedom of movement and space to grow. Boots have no advantage over shoes. If a child develops excessive wearing of the inner side of the shoes, obtain shoes that have a stiffer heel and some inbuilt arch support. An experienced shoe retailer can give good advice about this but remember that special orthotic inserts and treatments are rarely needed. Orthotics are sometimes used for older children who have pain. The right shoes for your child are shoes that fit correctly and that you can afford.

Gastroenteritis in children

What is gastroenteritis?

Gastroenteritis is an infection of the bowel that causes diarrhoea and sometimes vomiting. It is very common in young children and is mainly caused by viruses, particularly rotavirus and norovirus. Immunisation against rotavirus is given at 2, 4 and 6 months.

How is it caught?

The viruses can easily be picked up from other people who may have immunity but pass on the infection. Bacteria, usually on contaminated food and often spread by flies, can also cause the problem.

What are the symptoms?

- Diarrhoea—frequent, loose, watery, greenish motions
- Vomiting—usually early on
- Abdominal pain—colicky pain may be present
- Crying—due to pain, hunger, thirst or nausea
- Bleeding—uncommon but sometimes seen in motions
- Fever—sometimes present
- Anal soreness

What is the outcome?

The vomiting usually settles in a day or so. The diarrhoea may last for up to 10 days, but usually only 2 or 3 days.

What are the problems?

The serious problems are loss of water (dehydration) and loss of minerals such as sodium chloride and potassium. The younger the child, the greater the danger. The main cause is persistent vomiting.

What are the danger signs?

The danger signs are listlessness, difficulty in waking up, sunken eyes, very dry skin and tongue, pallor, and passing scanty or no urine. If these signs are present, contact your doctor without delay. Your child may need admission to hospital.

What is the treatment?

There is no special drug treatment for this problem. The inflamed bowel needs rest, and the body must have water and glucose. Medications to stop diarrhoea and vomiting should not be given. Most children can be managed at home.

Day 1

Give clear fluids a little at a time and often (e.g. 50 mL every 15 minutes if vomiting a lot). A good method is to give 200 mL (about 1 cup) of fluid every time a watery stool is passed or a big vomit occurs.

The ideal fluid is Gastrolyte, Hydralyte, New Repalyte or World Health Organization—recommended oral rehydration preparations. These are all glucose and mineral powders that

you can obtain from your pharmacist and make up according to the directions on the packet. Alternative fluids are:

- lemonade (not low-kilojoule) 1 part to 5 parts water
- sucrose (table sugar) 1 teaspoon to 120 mL water
- glucose 1 teaspoon to 120 mL water
- cordial (not low-kilojoule) 1 part to 16 parts water
- fruit juice 1 part to 5 parts water

Note: Children can suck suitable iceblocks. One preparation is Hydralyte, which is available at your pharmacy.

Warning: Do not use straight lemonade, fruit juice or sports drinks or mix up Gastrolyte with lemonade or fluids other than water.

Solids can be commenced as soon as possible and certainly after 24 hours. Start with bread, plain biscuits, jelly, stewed apple, rice, porridge or non-fat potato chips or give them food that they feel like eating or normally eat.

Days 2 and 3

Reintroduce your baby's usual milk or formula diluted to half strength (i.e. mix equal quantities of milk or formula and water).

Day 4

Increase milk to normal strength and gradually resume the usual diet.

Breastfeeding

If your baby is not vomiting, continue breastfeeding but offer extra fluids (preferably Gastrolyte) between feeds. If vomiting is a problem, express breast milk for the time being while you follow the oral fluid program.

Exclusion

Gastroenteritis is very infectious, so children should be kept away from others until 24 hours from the last bout of diarrhoea or vomiting.

Rules to follow for diarrhoea and vomiting

- Loss of fluids must be corrected first.
- Give small amounts of fluid often.
- Start bottle feeds after 24 hours.
- Continue breastfeeding.
- Start usual solids as soon as tolerated.
- Maintain good hygiene—the problem is infectious. Ensure you wash your and your child's hands with soap and warm water or alcohol antiseptic.
- Take care with nappy disposal.

Consult your doctor if:

- diarrhoea is profuse (e.g. 8 to 10 watery stools)
- vomiting persists
- any of the danger signs are present
- severe abdominal pain develops
- diarrhoea persists or recurs with the introduction of milk.

Glue ear

What is glue ear?

Glue ear is a condition where the middle ear becomes filled with a sticky fluid resembling glue. This fluid fills the space that is normally filled by air. It usually occurs in younger children but can occur at any age.

What causes glue ear?

The middle ear, which lies behind the ear drum, is connected to the inside and back of the nose by a narrow tube called the Eustachian tube. This tube, which acts like an air vent to the middle ear, becomes blocked and non-functional. A vacuum then develops in the middle ear and this causes fluid to seep into the space from cells in the vicinity.

Another important cause is a build-up of mucus in the middle ear after a cold or middle-ear infection (otitis media). This mucus builds up and then does not drain well through a blocked Eustachian tube. This fluid in the middle ear dampens sound vibrations of the ear drum and has an effect similar to turning down the volume in a sound system.

How common is glue ear?

Glue ear is very common. It is estimated that about 7 in 10 children have at least one episode of glue ear before the age of 4. As a rule it is short lived because the fluid absorbs and drains well.

It is more common in children who:

- have frequent colds, coughs or ear infection
- live in smoke-filled homes
- have been bottle fed (not breastfed)
- have a family history of glue ear (e.g. brother or sister).

What are the symptoms of glue ear?

- Hearing loss: the child's hearing is reduced, without going completely deaf. The degree of loss varies from child to child and from day to day in the same person. Children may be seen to turn up the sound on TV or other sound systems. Babies may not seem to respond normally to sounds.
- Earache: mild pain in the ears can occur causing children to pull at their ears.
- Developmental handicaps: persistent glue ear may uncommonly cause delay in speech and language due to impaired hearing especially in the classroom.
- Behavioural problems: frustration due to the reduced hearing and problems at school can result in behavioural problems in affected children.

What is the outcome?

The prognosis is usually good as most cases are symptomatic for only a few weeks because the sticky fluid tends to become watery and gradually drains, allowing air to return to the middle ear. As a rule, normal hearing returns within 3 months in 50% of cases. Glue ear lasts for 12 months or more in

only about 1 in 20 cases. Once the problem has cleared up it may return in the future, especially after an upper respiratory infection or ear infection. As children grow older the tendency to glue ear goes away because the Eustachian tube widens and ear drainage improves. Glue ear is uncommon over the age of 8 years. In rare instances persistent glue ear may lead to middle-ear damage and variable permanent hearing loss.

What is the treatment for glue ear?

Time and patience

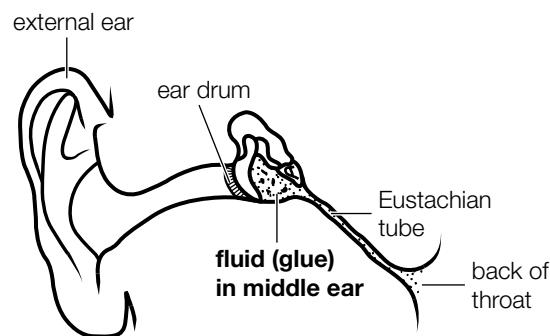
At first it is advisable to adopt a 'wait-and-see' approach, without any particular treatment, as most cases get better in time. A follow-up assessment by your doctor will usually be necessary.

Balloon treatment

An auto inflation method can be used in well-motivated older children. This involves blowing up a special type of balloon using the nose. It generates back pressure into the nose, helps open the Eustachian tube and allows improved drainage of fluid.

Surgery

Persistent and/or severe glue ear can be treated by a small operation on the ear drum. This involves making a small incision of about 2 to 3 mm in the ear drum, draining the fluid and then inserting a small ventilation tube called a 'grommet'. Grommets usually fall out of the ear after 6 to 12 months as the ear drum grows; the hole then seals over quickly.



Key points

- Glue ear is sticky fluid in the middle ear.
- It is common in children up to 8 years of age.
- It causes muffled hearing.
- It is not serious.
- It often clears up by itself within 3 months.
- More severe cases are treated by surgery including inserting a grommet tube.

Growing pains

What are growing pains?

'Growing pains' is the term used to describe vague aches and pains in the legs of children. These pains cannot be explained by an obvious reason such as a preceding injury. It is really an inaccurate term; the proper medical terms are 'benign nocturnal limb pains' or 'nocturnal musculoskeletal pains'.

Who gets growing pains?

They typically occur in children of both sexes between the ages of 3 to 7 years but may commence at 2 years of age. They can also occur in 8 to 12 year olds. There is usually a family history of the condition.

How common is the problem?

It is a common condition that affects up to 25% of children.

What are the features of growing pains?

- Pain wakes the child, who is usually quite distressed.
- The pains can occur in the late evening before bedtime.
- Pain is felt diffusely in the legs—usually around the knee, front of the thighs, calf and shin (in particular).
- It may affect the arms but this is uncommon.
- Pain lasts about 20 to 30 minutes regardless of any treatment.
- Pain may recur during the night.
- There is no pain or disability the following morning. The child wakes up as normal and can run around without any discomfort.

There are no other symptoms, such as fever, headache, joint stiffness or skin discolouration.

The child is normal upon examination (including touching the area) by a doctor or other person. We refer to it as a diagnosis by exclusion—that is, ruling out other conditions such as arthritis. The pains vary in intensity and most children don't experience them every day.

What is the cause of growing pains?

The cause is uncertain. There is no firm evidence that the growth of bones or muscles causes the pain. The most likely explanation is the muscular tiredness, aches and discomforts resulting from the running, jumping, climbing and similar activities during the day. However, in some children the pains are not related to exercise.

Can preceding activity lead to a 'bad' night?

Yes; it has been observed that children who have very active days, particularly an athletic day, can have a night of suffering from growing pains. Parents may be able to predict troublesome evenings and give analgesics such as paracetamol (not aspirin).

What is the outlook?

The pains resolve in time, usually after months or a few years, but clear by late childhood. If there are any real concerns your doctor will organise a blood test and X-ray but the results are generally normal.

What is the treatment?

Reassurance

Parents require a lot of reassurance that the disorder is a normal event and not serious, and that their child will gradually recover without any ill effect.

Improvised treatments

Parents attempt many different treatments but there is no proven special effective treatment.

Analgesics

Pain-killing tablets can be given but the pains have usually disappeared before the analgesics take effect. They can be given as a preventive measure if the pains occur at predictable times.

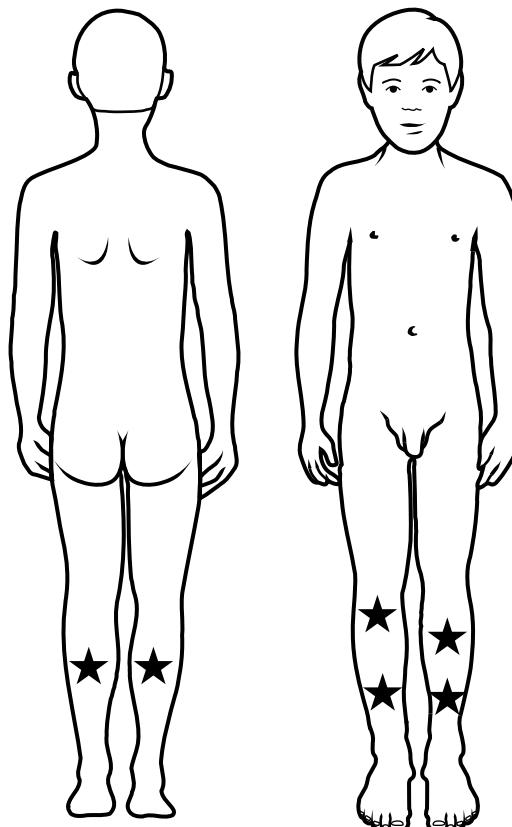
Heat packs

Some parents apply heat packs such as a warm washer or mini-towel but this treatment does not cause the pain to go away in a short time.

Massage

Of all the treatments given over the years, gentle massage of the aching area of the legs with an analgesic cream or oil seems to be best and is usually recommended. It is really the soothing attention that probably works.

In summary, the best treatment is tender loving care by reassuring and cuddling your child and massaging the painful areas.



Typical sites of growing pains

Hearing problems in children

What can cause hearing problems?

Your child may be born with a hearing problem, which can be hereditary or could have been caused by an infection such as rubella during pregnancy. The most common cause of hearing problems is a 'glue ear', which is a build-up of sticky fluid in the middle ear following middle-ear infections.

The outer ear can get blocked with things such as wax and foreign objects put in there by the child.

How might I know my child is deaf?

Your child may not respond in an expected way to sounds, especially to your voice. Deaf children do not respond to normal conversation or to the television, even if it is turned up loud.

Deafness could show up as unusual problems such as poor speech, disobedience and other behavioural problems and learning problems at school. The kindergarten or school teacher may pick up the problem.

What are the early signs of normal hearing?

The following stages at various ages are useful guides:

- 1 month: should notice sudden constant sounds (e.g. car engine, vacuum cleaner) by pausing and listening.
- 3 months: should respond to loud noise (e.g. will stop crying when hands are clapped).
- 4 months: should turn head to look for source of sound, such as mother speaking behind the child.
- 7 months: should turn instantly to voices or even to quiet noises made across the room.
- 10 months: should listen out for familiar everyday sounds.
- 12 months: should show some response to familiar words and commands, including his or her name.

Can hearing tests be done on babies?

Yes. Hearing can be tested at any age. No baby is too young to be tested, and this includes the newborn. If you have any concerns, contact your family doctor, who can arrange a hearing test at an acoustic laboratory. It is most important to diagnose a hearing problem as early as possible. Do not put it off. The best time to screen is by 8 months and certainly before 10 months. Nowadays most centres aim to diagnose hearing loss at 6 to 8 weeks of age.

Are hearing tests complex?

No; the tests are quite simple. They are not uncomfortable and, as you can imagine, the audiologists are very experienced in dealing with children and getting accurate results.

Remember

- Hearing problems are common in children.
- Children are normally born with hearing.
- However, some are born with deafness.
- The earlier deafness is detected the better.
- The first 12 months are critical for diagnosis and treatment.
- The most common cause of hearing difficulties is ear infection leading to 'glue ear'.
- Deafness can cause learning problems at school, poor speech and behaviour problems.
- Any speech or language delay requires investigation.
- Hearing tests are easy to do at any age.
- Hearing aids are required by 12 months to be effective.

Immunisation of children

The importance of immunisation

The use of vaccines during childhood has dramatically reduced the number of deaths from common childhood infectious diseases. Immunisation is vital preventive medicine, and parents have a responsibility to make sure their children are immunised. Whenever we have an infection, our bodies automatically defend themselves by producing substances called antibodies, which neutralise the infection. These antibodies remain in the body to fight further contact with germs, and this protection is called immunity. A vaccine works by stimulating the production of antibodies, which fight infection, to give us this immunity.

What diseases do we vaccinate against?

Diphtheria

Diphtheria is a bacterial infection that causes a membrane to grow across the throat and block the airway. It is now rarely seen because of the successful immunisation program.

Whooping cough

Whooping cough (*pertussis*) is a serious bacterial infection of the chest that causes a dramatic cough in children as they struggle to breathe. It is still a common infection in our community, but immunisation has made it a milder disease. Children who have not been immunised can get severe attacks.

Tetanus

This is another bacterial infection; it causes a severe infection known as lockjaw. Although cases still occur, it is rare because of our awareness of the problem.

Note: Diphtheria, tetanus and whooping cough are given as a combined vaccine (triple antigen) in four separate doses.

Polio

Polio, once a common disease, is a severe viral infection of the nervous system. It causes paralysis of parts of the body. The vaccine is given by injection as four doses.

Hepatitis B

Hepatitis B immunisation should commence just after birth, followed by three boosters.

Hepatitis A

Two doses are required for Aboriginal and Torres Strait Islander people living in areas of higher risk.

Measles

Measles is a very serious viral illness that can cause serious brain damage (due to encephalitis) in its victims. An injection given at 12 months and then a booster at 10 to 16 years provide immunity. The vaccine is now combined with mumps and rubella.

Mumps

Mumps is one of the well-known infectious diseases of childhood that is now being controlled with immunisation. It can infect the brain (meningitis and encephalitis) and the testicles in young men.

Rubella

Rubella, or German measles, is not a serious disease except if contracted during the first 3 months of pregnancy, when it can cause serious problems in the baby. The vaccine is available for all children at 12 months and then during early adolescence for schoolgirls. Being immune to rubella takes a great load off the mind of any expectant mother.

Haemophilus influenza type B (HiB)

This is a serious bacterial infection that caused many deaths from meningitis and epiglottitis. The vaccine was introduced in 1992, and infections are now rarely seen. Four doses are given.

Meningococcus

Vaccination at 12 months is given to immunise against the C strain of the potentially deadly meningococcal infection.

Varicella (chickenpox)

The vaccine is recommended as a single dose at 18 months but can be given from 12 to 13 months. It should be considered at 10 to 13 years if there is no history of varicella.

Pneumococcus

Pneumococcus causes respiratory infections such as pneumonia. Vaccination is recommended for children as a three-dose series; extra doses are required for those at risk.

Viral gastroenteritis

A vaccine against rotavirus infection is now available as three doses.

All of the above are funded as part of the Australian Government's national recommended schedule.

Human papillomavirus (HPV)

Human papillomavirus (HPV) is associated with genital warts and cervical cancer. The vaccine is recommended for females aged 9 to 26 years.

Are there any side effects?

The vaccines usually are free of side effects, although a mild reaction can occur. Sometimes an injection can cause the child to be quite ill, and it usually is the whooping cough (*pertussis*) component. Your doctor will be able to advise about this.

The Australian standard vaccination schedule (recommended by the National Health and Medical Research Council, Australia) can be viewed online at <http://immunise.health.gov.au>, or ask your doctor about it.

Impetigo

What is impetigo?

Impetigo, more commonly called ‘school sores’, is a very contagious (catching) skin infection. It can occur anywhere on the skin but usually affects the face, particularly around the mouth and nose. Impetigo is most common in infants and children, particularly those just starting school, but can affect adults.

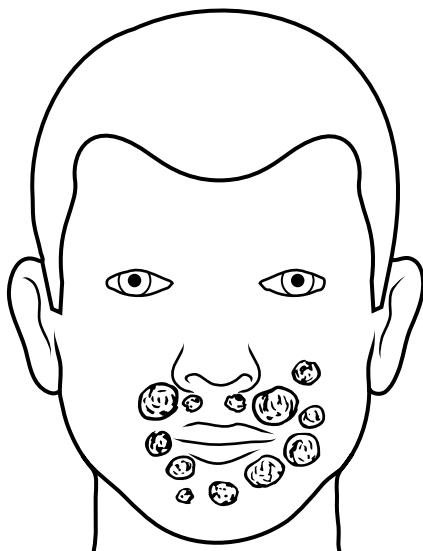
What is the cause?

Impetigo is caused by two strains of bacteria, called *Streptococcus* and *Staphylococcus aureus*, which is the most common cause. Those with sensitive skin, lowered resistance from illness, poor hygiene and poor nutrition have an increased risk of infection. The risk also increases with warm, humid weather and in crowded living conditions.

What are the symptoms?

Impetigo usually commences with a small patch of tiny blisters around the mouth and nose. These break open to form a weeping area of red skin that soon develops a golden crust. It then spreads from the edges and forms new infected patches. This spread can be very rapid.

Impetigo can occur in other areas on the body, especially around the buttocks, legs and arms. The blisters and crust of impetigo are not painful but they may itch. A skin swab and culture will confirm the responsible germ.



Typical sites of the scores of impetigo

What are the risks?

It is not a serious condition, although infection with *Streptococcus* can lead to a serious kidney disease called glomerulonephritis. It can be very serious if it occurs in newborn infants, when the rapidly spreading infection will cause them to become very ill.

What should be done to prevent spread?

It is important to treat impetigo as soon as possible and to take measures to prevent its spread within the family and to others. Patients should have their own towel, soap and face towels and never share them (disposable paper towels are useful). All family members should use an antibacterial soap. Fingernails should be cut short and the picking of sores avoided. If necessary, cover the sores with gauze and tape with a watertight dressing to keep hands off them. Infected adults should wash their hands thoroughly with an antiseptic before preparing food. Keep bed linen, clothes and towels separate. Children should be kept away from school or other childcare settings until the skin has completely healed.

What is the treatment?

Your doctor will prescribe an antibiotic or antiseptic (which is preferable) lotion. It is important to wash the affected area 3 times daily with an antibacterial soap and gently sponge off any crusts with warm salty water. Then apply an antiseptic lotion such as chlorhexidine or povidone-iodine (Betadine). Wash the hands carefully after this treatment. This method should cure most mild cases. A topical antibiotic ointment such as Bactroban may be prescribed for a few small persistent spots. Apply the ointment with a cottonwool swab. For more severe cases, penicillin-type antibiotics taken by mouth will be needed.

What is infant colic?

It is the occurrence in a well baby of regular, unexplained periods of inconsolable crying and fretfulness, usually in the late afternoon and evening, especially between 2 weeks and 16 weeks of age. No cause for the abdominal pain can be found, and it lasts for a period of at least 3 weeks.

It is very common and occurs in about one-third of infants.

What are the typical features?

- Baby between 2 and 16 weeks old
- Prolonged crying—at least 3 hours
- Crying worst at around 10 weeks of age
- Crying during late afternoon and early evening
- Occurs at least 3 days a week
- Child flexes legs and clenches fists because of the 'gut ache'
- Child gets better naturally with time

The myths of infant colic

It is important for concerned parents to know that the colic is not caused by the mother's or family's anxiety, by artificial feeding or by food allergy.

Unfortunately, the problem does tend to cause tensions in the family, but it must be emphasised that the baby will thrive, the condition will pass away and the parents are not responsible for the colic.

Some cautionary advice

This can be a danger time for child abuse by frustrated parents, so please speak to someone about any troublesome feelings. Remember that it is no one's fault and it will soon settle. You must avoid using fad diets or herbal treatments for the baby.

What is the treatment?

- Use gentleness (such as subdued lighting where the baby is handled, soft music, speaking softly, quiet feeding times).
- Avoid quick movements that may startle the baby.

- The advice from and close contact with a maternal or child health nurse is most helpful.
- Advice from the Australian Breastfeeding Association is helpful.
- Make sure the baby is not hungry—underfeeding can make the baby hungry.
- If the baby is breastfed, express the watery foremilk before putting the baby to the breast.
- A lactose-free formula can be tried in infants with symptoms suggestive of lactose intolerance.
- Provide demand feeding (in time and amount).
- Make sure the baby is burped and give posture feeding.
- Provide comfort from a dummy or pacifier.
- Provide plenty of gentle physical contact.
- Cuddle and carry the baby around (e.g. take a walk around the block).
- A carrying device such as a 'snuggly' or a 'Meh Tai Sling' allows the baby to be carried around at the time of crying.
- Make sure the mother gets plenty of rest during this difficult period.
- Do not worry about leaving a crying child for 10 minutes or so after 15 minutes of trying consolation.

Mother's diet

The breastfeeding mother's diet has been a controversial issue, but some mothers have found that cutting out cow's milk, eggs and spicy foods has helped their babies' colic. A trial of avoiding these foods, especially cow's milk products, in the diet is worthwhile.

Drug treatment

Drugs are not generally recommended, especially as some may sedate the baby. However, for severe problems your doctor can prescribe something to help. Infacol Wind Drops may be soothing. Fortunately the problem is not serious and soon gets better.

Intoeing in children (pigeon toes)

What is intoeing?

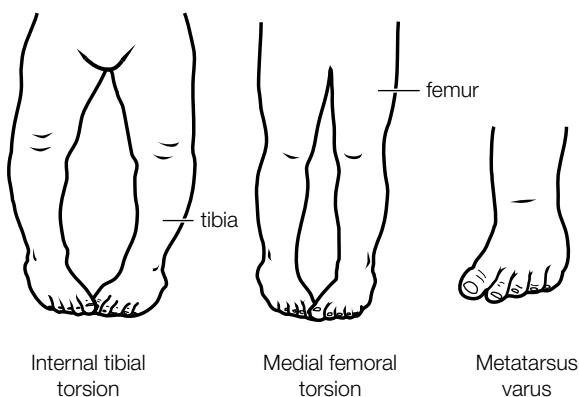
It is the turning in of children's feet when they walk.

It may be referred to as pigeon-toed. The cause is usually a twist in one of the leg bones, especially the tibia (shin bone). As a rule the twist in the tibia and femur is gone by school age.

Intoeing is common in children but invariably improves with age. Corrective shoes or inserts do not hasten improvement. It is best left to correct itself as the child grows.

There are three different causes:

1. hooked foot: in infants
2. tibial torsion: in toddlers
3. inset hips: in kindergarten or preschool children.



Hooked foot (metatarsus varus)

Hooked foot is caused by the position of the baby before birth. The foot is turned inwards at the ankle. The sole of the foot is bean shaped. It usually gets better without treatment during the first month. If it is still present after 3 months or so, it should be seen by a specialist, who may apply a temporary plaster cast.

Tibial torsion

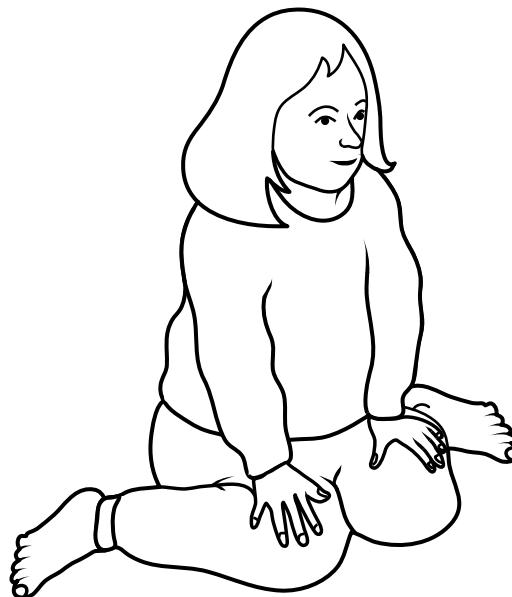
Tibial torsion is where the main bone (the tibia) of the leg rotates inwards from below the knee. It occurs when the

normal development of rotation is prevented by the child's sleeping posture.

Most legs with tibial torsion get better without treatment. If the legs are not symmetrical (the same on both sides) or the torsion persists for longer than 12 months, the child should be seen by a specialist.

Inset hips (femoral torsion)

With inset hips the femur, which sits in the socket of the hip joint, tends to rotate inwards. The cause is unknown. It is usually most severe when the child is about 5 to 6 years old and is normal up to 12 years of age. The children tend to sit in a 'w' position but this is not the cause of inset hips. Fortunately, most children outgrow this condition before the age of 12. If it persists for 8 years after being first noticed, referral to a specialist is necessary.



The 'W' position of femoral torsion (inset hips)

Measles

What is measles?

Measles is a highly contagious disease caused by a virus; it can have more serious after-effects than many people realise. The complications can be dangerous, and so the illness should be taken seriously.

What are the symptoms?

For the first 3 days the patient is miserable with symptoms like a heavy cold—fever, runny nose, red and watering eyes and a dry, hacking cough. By the third day tiny white spots like grains of salt (called Koplik's spots) appear inside the mouth. On the fourth and fifth days a blotchy red rash appears. The rash starts behind the ears and on that day spreads to the face, the next day to the body and later to the limbs. By the sixth day the rash is fading, and after a week all the symptoms have disappeared. However, the rash can leave a pinkish red stain.

If a cough and red eyes are not present, the patient is unlikely to have measles.

The diagnosis can be confirmed by a blood test.

How is it spread?

The disease is very infectious and is spread to other people usually by kissing, coughing and sneezing. Once inside the body the virus has an incubation period of about 10 to 14 days, and the patient is infectious for about 5 days before and 5 days after the rash appears.

What are the risks?

Most patients make a good recovery with lifelong immunity from further attacks, but some get complications from bacterial infections affecting the ear or chest, including pneumonia.

There is a small but important risk of getting encephalitis (inflammation of the brain), which can lead to permanent brain damage. For this reason, immunisation of all the population is a major aim of health authorities.

What is the treatment?

The patient should rest quietly, avoid bright lights and stay in bed until the fever has settled. Any high fever should be treated with tepid sponging and paracetamol. It is important to drink plenty of fluids.

The nasty cough can be controlled with a cough linctus. However, there is no specific treatment and no special drug for

measles. Antibiotics are not effective against viral infections, but are used if complications such as ear infections and pneumonia develop.

School exclusion

Children should be kept away from school until they have recovered or for at least 5 days from the appearance of the rash.

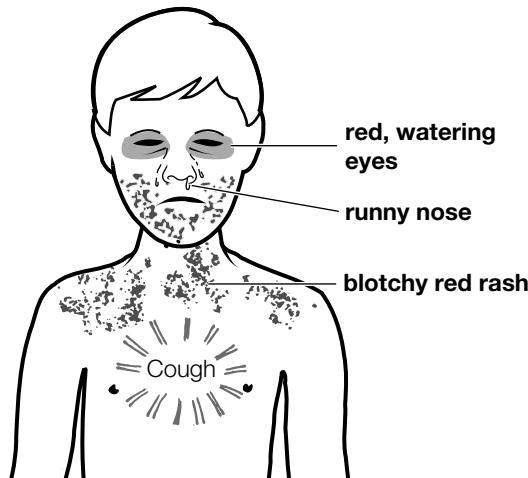
What should you do?

- Notify your doctor if any unusual problems develop, including severe constant headache, a stiff neck, convulsions, breathing problems, unusual drowsiness or earache.
- Notify school authorities.

How can measles be prevented?

A vaccine against measles is available and recommended to be given to children at 12 months and once more prior to school entry at 4 to 5 years. It is combined with the mumps and rubella vaccines.

All children should be vaccinated against measles. The vaccine is free.



Typical symptoms of measles

What is mumps?

Mumps is a viral infection of the salivary glands, especially the parotid gland, which lies in front of and below the ear. It was one of the common infectious diseases of childhood, but is not seen as often now because of the immunisation program.

What are the symptoms?

- Swollen and tender glands—one parotid gland swells first, and in 70% of cases the opposite side swells after 1 or 2 days (other glands that lie just below the jaw may also be infected)
- Fever
- Weakness and lethargy
- Dry mouth
- Discomfort upon eating or opening the mouth
- Headache

How is it spread?

Mumps is spread by coughing or sneezing. The virus takes about 18 days to incubate after contact. Mumps is only a moderately infectious disease. It is infectious from 2 days before its onset up to the time the swellings disappear (usually after 6 days but can be up to 12 days).

The patient should be isolated, especially from adults who have not had mumps.

What are the risks?

Mumps usually is a mild illness, but an uncommon complication is swelling or inflammation of the testes in a male or of the ovaries in a female. It affects adolescents and adults, especially males. Swelling usually affects one side only, coming on 3 to 4 days after the neck swelling. The swelling, which can be very painful for a day or so, subsides after a few days. Sterility is rare, and occurs only if both testes are

affected. Like any viral infectious disease, in very rare cases it can cause meningitis and encephalitis (inflammation of the brain), deafness and pancreatitis.

What is the treatment?

There is no special treatment because the illness has to run its course. General measures are:

- Take paracetamol for pain or high fever.
- Rest until the fever settles.
- Follow a normal soft diet and take ample fluids. Drinking through a straw may be more comfortable.
- Apply heat to the glands (e.g. warm washers or towels) to help relieve any discomfort or pain. Alternatively, use cold compresses.

School exclusion

Nine days from the onset of symptoms is recommended, or up to the obvious disappearance of the swollen glands. It is usual to isolate the patient to reduce the risk of spreading the disease.

What should you do?

Notify your doctor if:

- a boy gets pain or swelling in the testes or a girl complains of low abdominal pains
- the patient appears very sick (e.g. severe vomiting or headache), is delirious or has a stiff neck
- the hearing seems affected.

Notify school authorities.

How can mumps be prevented?

Mumps can be prevented by a vaccine, which in Australia is recommended to be given to children at 12 months and once more between 4 and 5 years. It is combined with the measles and rubella vaccines.

Nappy rash

What is nappy rash?

Nappy rash (also called diaper dermatitis) is a red, irritating skin rash corresponding to the area covered by the nappy. It affects the genitals, buttocks, groin and thighs, but usually spares the creases not in contact with the nappy.

Who gets nappy rash?

It is found in children up to 2 years old and has a peak incidence from 9 to 12 months. Most children will develop nappy rash at some stage of infancy with an estimated 50% having a significant problem.

What are the symptoms?

The skin is red, spotty and moist. It is irritated when urine is passed, and so causes the baby to cry.

What causes nappy rash?

It can be a common presentation of an underlying skin disorder such as seborrhoeic dermatitis, atopic dermatitis (eczema) or psoriasis. It is basically caused by excessive contact of the skin with urine or faeces. It is common—most babies have nappy rash at some time, but the skin of some babies is more sensitive than others. The appearance of nappy rash does not mean that the carer/s have been neglectful.

The main cause is dampness due to urine and faeces, especially from a chemical formed from the urine in the nappy. It is a problem in older babies who sleep through the night without a nappy change. *Candida albicans* (thrush), which is a yeast (fungal) infection, almost always grows on the damp skin and needs to be treated.

Other causes or aggravating factors are:

- a tendency of the baby to eczema
- a tendency of the baby to seborrhoea
- rough-textured nappies
- detergents and other chemicals in the nappies
- plastic pants (aggravate wetness)
- excessive washing of the skin with soap
- too much powder over the nappy area
- teething, which appears to make it worse.

What is the treatment?

1. Keep the area dry. Change wet or soiled nappies frequently and as soon as you notice them. Good-quality disposable nappies are quite suitable.

2. After changing, gently remove any urine or moisture with diluted sorbolene cream or warm water.
3. Wash gently with warm water, pat dry (do not rub) and then apply any prescribed cream or ointment to help heal and protect the area. Lanolin or zinc cream applied lightly will do. Stoma adhesive powder is an excellent protective substance.
4. Expose the bare skin to fresh air whenever possible. Leave the nappy off several times a day, especially if the rash is severe.
5. Do not wash in soap or bath too often—once or twice a week is enough.
6. Avoid powder and plastic pants.
7. Use special soft nappy liners that help protect the sensitive skin.

How to care for cloth (non-disposable) nappies

1. Rinse soiled nappies immediately in cold water and rinse out any disinfectants or bleaches used before washing.
2. Wash the nappies in a normal hot wash in the washing machine.
3. Make sure the nappies are rinsed well to remove chemicals used and then dried.

Medication

For persistent nappy rash, your doctor will usually prescribe a mixture of mild cortisone cream and an antifungal cream to treat the thrush. Antifungal creams such as miconazole (e.g. Daktarin, Daktozin) or clotrimazole (e.g. Clonea) can be bought without prescription. Such creams can be mixed with an equal amount of cortisone cream and applied 4 times a day after nappy changes. A soft skin moisturiser such as Vaseline or a mixture of zinc oxide and castor oil should be used to keep the skin lubricated.

Key points

- Keep the skin dry.
- Expose the skin to air and sunlight where possible.
- Use protective creams.
- Do not use soap or plastic covers.
- Do not bathe the baby too much.
- Visit your doctor if the rash is not responding after 4 days.

Normal development in children

It is interesting to compare the growth and development of your child with the age at which the average child reaches a specific stage, called a milestone. The following guidelines represent an average age that these milestones are usually reached.

Interesting facts

Vision is present at birth and matures gradually to adult vision at about 12 months.

Hearing is present at birth; if not, the first 12 months are critical to correct it.

Normal development in children

Milestone	Age
Lifts chin up	4 weeks
Notices sudden constant sounds (e.g. vacuum cleaner)	4 to 5 weeks
Social smile	6 weeks
Smiles readily	2 months
Vocalises when talked to	2 months
Follows moving person with eyes	2 months
Laughs	3 months
Coos	3 months
Recognises mother	3 months
Responds to loud noise	3 months
Squeals in delight	3 months
Grasps and plays with rattle	3 to 4 months
Turns to voice	3 to 4 months
Lifts head	3 to 4 months
Rolls over (prone to supine)	4 months
Sits with support	4 to 6 months
Rolls (supine to prone)	5 months
Reaches and grasps	5 to 6 months
Transfers objects from hand to hand	5 to 8 months
Turns towards soft sound	6 months
No head lag when pulled up to sit	6 months
Turns instantly to voices across room	6 to 7 months
Feeds self biscuit/rusk	6 to 8 months
Laughs, squeals and chuckles	6 to 8 months
Sits without support	6 to 9 months
Babbles	6 to 9 months
Stands holding on	6 to 10 months
Crawls	7 to 9 months
Plays 'peek-a-boo'	8 to 9 months
Says mama/dada (inappropriately)	8 to 9 months
Anxious with strangers	8 to 9 months
Waves goodbye	8 to 12 months
Pulls up to stand	9 to 10 months
Understands 'no'	9 to 10 months
Cruises	10 to 11 months
Finger feeds	10 to 12 months
Walks alone or with one hand held	10 to 15 months
Says mama/dada (appropriately)	10 to 18 months
First word	11 to 12 months
Follows one-step command	12 to 14 months
Understands several words	12 to 15 months
Speaks single words	12 to 15 months
Points to parts of the body	14 to 24 months
Helps with dressing	14 to 24 months
Pulls off socks	15 to 20 months
Climbs stairs	15 to 20 months
Combines two words	15 to 24 months
Uses a spoon	15 to 24 months
Builds tower of two blocks	16 to 18 months
Points to animal pictures	20 to 24 months
Uses a fork	21 to 24 months
Scribbles spontaneously	24 to 26 months
Builds tower of four blocks	24 to 26 months
Kicks ball forward	24 to 26 months
Pretend play	24 to 26 months
Runs well	24 to 30 months
Buttons up	24 to 30 months
Speech all understandable	26 to 30 months
Walks up stairs: alternate feet	30 months
Names one colour	30 months
Unbuttons	30 months
Rides tricycle	2½ to 3 years
Bowel control	2 to 4 years
Bladder control	2 to 4 years
Names four colours	3½ to 4 years
Gives first and last names	4 years
Draws person with three parts	4 years
Ties shoelaces	5 years
Dresses without supervision	5 years
Strings sentences together	5 years
Fluent speech	5 years
Can skip	5 years

A good sign of healthy development is a child who is alert, is interested in objects, relates well to others and is explorative. If your child does not appear to reach these milestones at the listed age there may be no reason to be unduly concerned, as every individual is different and there is a large variation in reaching milestones. If you have any concerns speak to your doctor or infant welfare nurse.



The normal child can sit without support from 6 to 9 months (average 8 months).

Peanut allergy

What is a food allergy?

Allergies are oversensitive reactions by the body's immune system to certain substances, including foods, due to the release of a chemical in the body called histamine.

A food allergy, which usually starts in infancy and childhood, is commonly caused by milk and other dairy products, eggs and/or peanuts. Other foods that may cause allergy include oranges, soya beans, nuts, chocolate, fish and wheat.

What about peanut allergy?

Peanut allergy, which is becoming more common, especially in children, can be a very serious life-threatening problem. It is a reaction to peanut protein and is seen in about 1 in 50 children. The signs usually appear in the first 3 years of life. It is a particular problem if it occurs in children with asthma or eczema.

A special feature of peanut allergy is that it usually gets worse with time, while most other food allergies improve.

The problem persists in about 80% of those who develop the initial reaction.

What are the symptoms?

Reactions to peanuts usually begin within minutes of contact.

The first symptoms are:

- itching, especially around the mouth
- burning, especially around the mouth.

Others that follow may include:

- flushing, especially of the face
- skin rash
- wheezing
- swelling of the tongue and lips
- difficulty breathing
- nausea and vomiting
- abdominal pain
- diarrhoea
- collapse
- loss of consciousness.

How is it diagnosed?

It is diagnosed initially upon suspicion of an abnormal reaction to food containing peanuts. A food challenge test and skin prick test, and/or RAST test under medical supervision, help confirm the diagnosis.

What are ways of being exposed to peanuts?

Exposure can come from:

- eating peanuts directly
- eating peanut products, for example:
 - peanut sauce
 - peanut butter
 - certain muesli bars
 - certain chocolates
- close contact with a person who eats the products listed above
- mother's diet via breast milk
- peanut-based oils massaged into the skin.

Ingested peanuts cause the most severe reactions but the allergy can be triggered by skin or eye contact with the food, or even inhalation of food particles containing peanut.

What are the effects of becoming sensitised?

Once sensitised, a child can get a serious allergic reaction to even a minute amount of peanut. There is evidence that as little as one two-thousandth of a peanut can do this. In those children who do have reactions, about 80% continue to have reactions, which may become worse over time.

What are the risks?

There is a risk of anaphylaxis, which is a potentially fatal collapse or 'shock'. The affected child will suddenly swell around the face, go pale or blue and go floppy. Urgent medical attention is needed so that life-saving adrenaline can be injected. An ambulance or your doctor should be called.

The combination of asthma and peanut allergy is quite dangerous.

Do peanuts cross-react with other nuts?

Children with peanut allergy can become allergic to other nuts such as walnuts, hazelnuts, cashews, almonds, pistachios and macadamia nuts.

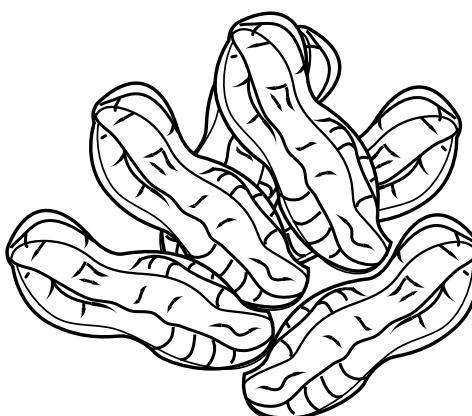
What can be done?

It is vital for a person with a peanut allergy to avoid eating or coming into contact with peanut-containing foods. It is also important to read all food labels on every food you buy or eat to determine if the food contains any traces of peanut. When eating away from home ask about the probability of peanut occurring in food ingredients and preparation methods. This applies particularly to food outlets or restaurants preparing Asian food. Be wary of satay sauce.

Those at special risk should have an emergency anaphylaxis kit with the Adrenaline EpiPen or Anapen on standby at home or when away from home.

It is advisable for women who have a history of allergic (atopic) disorders to avoid eating peanut products during pregnancy and when breastfeeding.

Breastfeeding for the first 6 months is believed to help prevent peanut allergy.



Rearing a happy child

As parents we want our children to be happy and to grow to be well adjusted. We want to give them the best possible opportunities. We cannot guarantee that our children will be happy, but they have certain basic needs and dreams that we should try to fulfil.

Our children did not ask to be born. They are a gift to this world, and we have to treat this special person with love, care and due responsibility. We must realise that children are not all alike, and that each is an individual with his or her own special personality and needs. However, every person has the same basic needs that require attention. These needs include comfort, security, food, activity, warmth and proper sleep.

Being a good parent is one of the hardest and most challenging jobs in the world, and most parents do a wonderful job in raising children. Some important basic needs of children follow.

Children need love

Children are not 'spoiled' by too much love, but rather by too little. The little 'brat' is usually the child who is neglected in some way and is seeking attention.

Children have 'antennae'—they can sense feelings towards them. The child who is loved knows it and develops into a contented, mature adult.

Love has to be unconditional—no strings attached. Children have to receive genuine love, for their own sake—not because they are pretty or talented or have great personalities. No matter who they are, or what they look like, or how they perform at school or sport, they all need encouragement and praise so that they have a healthy self-esteem.

Love is not being possessive and clinging to children with smothering affection or showering gifts on them. Love is common sense.

Love is to a child what sunlight is to a flower.

Children need security

A feeling of security is vital to children. It comes not only from being loved but also from growing up in a secure home that is free from fighting parents, child abuse, over-interference from brothers and sisters and the problems of drugs (such

as alcohol abuse). A warm bed, sufficient food and clothing are all part of the feeling of security.

Children need play

Children need to be active and creative; they need to be given the opportunity to express themselves freely. 'Make-believe' play is important, so that they can work through their fantasies and frustrations.

Some rules for healthy and happy play are:

- Play with parents.
- Play in a supervised playground.
- Have playmates.
- Imitate the jobs of parents/other adults.
- Play with sand and water (a sandpit is great).

Children need discipline

Children need the security of firm, loving discipline. They need to be protected from dangerous toys, games and situations. We must draw the line between wholesome freedom and allowing them to do as they like. It is important for children to learn early that there are certain limits in behaviour. They must learn to respect their own and other people's possessions.

Be consistent with your discipline. Never make threats that you cannot or will not carry out. Taking away certain privileges for a while (rather than physical punishment) when children are naughty seems to work well.

Children need honesty

It is important to be honest with children. They learn to resent incorrect and illogical decisions and comments from their parents. This means being honest when explaining things that hurt, such as an injection or a visit to the dentist. We must also be fair in our comments about others, including their race and religion.

Remember

- Parents are heroes and role models for their children.
Don't let your children down.
- Parents are the best teachers.
- At times parents need the wisdom of Solomon.

Reflux in infants

What is gastro-oesophageal reflux?

Reflux is where the food in the stomach overflows from the stomach back up into the oesophagus (gullet). It often causes a baby to bring up or vomit milk after a feed.

Posseting and simple reflux

A mild degree of reflux is normal in babies, especially after they burp; this condition is called posseting. However, the reflux can be quite severe in some babies, who appear to vomit after their bottle-feeding or breastfeeding. In these babies the cause is a malfunction in the junction between the oesophagus and stomach which normally acts as an obstruction to the milk. Simple reflux, which affects up to 50% of babies, is vomiting or regurgitating small quantities of milk after feeding. These babies are known as 'happy spitters'. Although it may concern parents, it is usually not harmful. The babies generally are comfortable and thrive.

What are the symptoms of reflux?

Milk will flow freely from the mouth soon after feeding, even after the baby has been put down for a sleep. Sometimes the flow will be forceful and may even be out of the nose. Some infants will cry, presumably because of heartburn.

What is the outlook?

Reflux gradually improves naturally with time and usually ceases soon after solids are introduced into the diet. In most cases you don't have to do anything about reflux. Most cases clear up completely by the age of 10 or 12 months, when the baby is sitting. Severe cases tend to persist until 18 months of age. Contact your doctor should any unusual symptoms appear.

What are the risks of reflux?

- Failure to thrive
- Peptic (acidic) oesophagitis (inflammation of the gullet due to acidic stomach contents)
- Peptic stricture (narrowing causing obstruction)
- Lung problems, possibly from aspiration (breathing in) of milk and acid into the lungs

What are the symptoms that should concern parents?

- Difficulty swallowing or choking easily
- Green or blood-stained vomit
- Projectile vomiting (contents erupt from the mouth)
- Distressed after feeds (e.g. crying, screaming)
- Refusal to eat
- Stops putting on weight
- Irritable and difficult to settle
- Hoarse voice
- Heartburn in older children

What is the treatment?

In the absence of signs of oesophagitis, aspiration or growth failure, the following are recommended.

Simple home measures

- Avoid excessive handling of the child.
- Posture after feeds: place the child in a cot in the head up position at or near 20 to 30°.
- Don't let the baby lie flat for at least 30 minutes after feeding.
- Place on the left side for sleeping.

Feeding

Avoid excessive feeding. It is better to give small feeds quite often rather than large, infrequent feeds. Changing formula or changing to breastfeeding does not have any effect and is not recommended.

Thickening of feeds

Giving the baby thicker feeds usually helps those with more severe reflux. Parents can add a thickener to existing feeds or use a pre-thickened formula. The old-fashioned remedy of using cornflour blended with milk in bottles is still useful.

- Pre-thickened formulas if formula fed: commercial preparations include Enfalac AR and S26 AR
- Thickening agent: examples are Carobel, Gaviscon and Karicare

For worrying symptoms

Infants not responding to the above measures may need to be referred to a specialist for special tests such as X-rays and endoscopy (the examination of the gullet by means of a tube with a camera in it). Food sensitivities should be thought of as a possible cause for the symptoms.

Medication

Infants with oesophagitis may be treated with medications that may include antacids or acid suppressants. For example:

- Antacids (e.g. Mylanta)
- H₂ receptor antagonists (e.g. ranitidine)
- Proton pump inhibitors (e.g. omeprazole)

Key points

Reflux:

- is common
- improves with age
- usually clears up by 12 to 18 months of age
- is helped by elevating the head of the cot
- is helped by thickening the feeds
- is helped by frequent small feeds
- is helped by propping up the baby after feeds.

What is roseola?

Roseola is a common contagious viral infection that can cause a fever and rash in babies and young children. It is also called roseola infantum, exanthem subitum or sixth disease. It is caused by a virus from the human herpes group, type 6, but it is not the same as 'herpes' (which is caused by the herpes simplex virus) and it does not cause other herpes infections such as shingles.

How is roseola spread?

The virus is spread from person to person by droplets of fluid from the nose or mouth travelling through the air or by direct contact. The tiny droplets of fluid are expelled when an infected person talks, coughs, sneezes or laughs. If people touch these droplets and then touch their own noses or mouths they can become infected. The incubation period (time from contact to the appearance of symptoms) is 9 to 10 days and it is most infectious when the rash appears.

The risk to the child increases with exposure to a day care centre or to public places. There is no known way to prevent its spread.

Who gets roseola?

It typically affects children aged 6 months to 3 years. It is uncommon after the age of 3. Up to 95% of children become infected with the virus by the age of 2, but only about one-third of these children will go on to develop the rash of roseola. Roseola rarely affects adults, because they usually develop immunity to it during childhood.

What are the symptoms and signs?

- Sudden onset of fever, sometimes very high
- Runny nose
- Irritability
- Drowsiness
- Swelling of lymph glands of the neck

The temperature falls after 3 to 5 days, then a red rash appears. Some children simply have the high temperature without a rash.

What does the rash look like?

- A bright red, spotted rash
- Mainly confined to the trunk (chest and back) and arms
- Usually sparse on the face and legs
- Appears as the fever subsides

- Disappears within 2 days
- Turns white (blanches) when pressed

Note: Sometimes doctors can misdiagnose the rash as a drug reaction to an antibiotic such as penicillin if the child is given an antibiotic for the fever and runny nose. Spontaneous natural recovery within 1 week is usual.

What are the risks?

Roseola is usually a mild condition, but febrile convulsions (fits or convulsions due to fever) may occur due to the high temperature that can develop in some children. Roseola may be the cause of up to one-third of febrile convulsions in children under 2 years of age.

Rare complications include inflammation of the brain or its coverings (meningitis) and hepatitis.

What is the treatment?

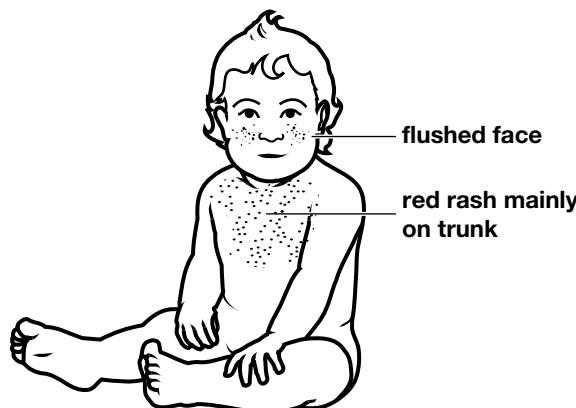
There is no special drug to treat roseola, so the treatment is to support the child and treat the symptoms.

- Get the child to drink plenty of fluids, especially water.
- Give paracetamol for fever.
- Rest the child at home during the fever.
- Antibiotics are not needed and should be avoided.

When to seek help

Call your general practitioner or emergency service if your child:

- is very sleepy and hard to wake
- will not drink and is dehydrated
- has a convulsion, especially if it lasts more than 5 minutes.



Typical symptoms of roseola

Rubella (German measles)

What is rubella?

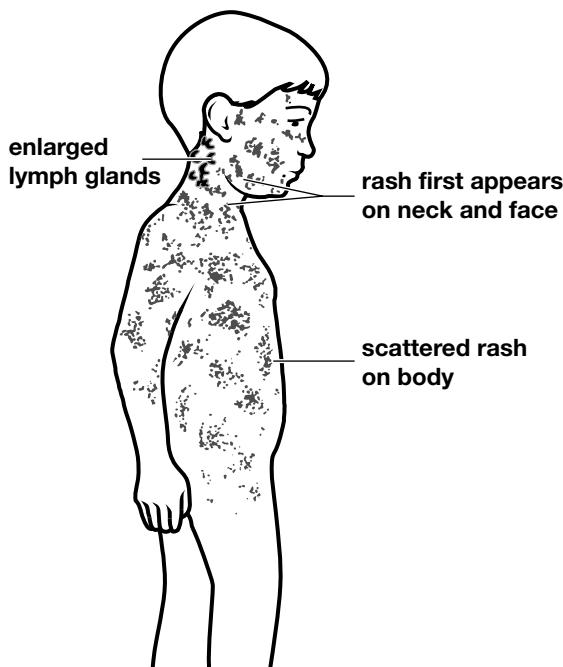
Rubella is an infectious disease caused by a virus called the rubella virus. It is also called German measles, because the disease was first described in Germany. It is usually a very mild illness and causes no more trouble than a common cold. However, it has very serious consequences for a woman who gets infected in the first 3 months of her pregnancy. Her baby may be born with blindness, deafness and an abnormal heart. This is called congenital rubella.

What are the symptoms?

The patient usually feels unwell, has a slight fever, possibly a runny nose, and swollen glands (lymph nodes) behind the ears and in the neck.

A rash appears on the first or second day and consists of reddish-pink spots that appear first on the face and neck and then spread rapidly to the body, especially to the chest. The rash lasts for about 2 to 3 days, and by the fourth or fifth day all symptoms have faded away.

It is possible to have picked up the rubella virus and have no obvious symptoms. This applies to about one-quarter of all patients, who fortunately become immune from further infection.



Typical symptoms of rubella

How is it spread?

The disease is moderately infectious and is spread by droplets from the nose and throat. Once inside the body, the virus has an incubation period of about 14 to 21 days before it starts to cause symptoms (if at all).

What are the risks?

The main risk is to an unborn baby. A more common complication, especially in adults, is stiff, swollen joints (arthritis), which is usually short-lived. Rarely (1 case in 5000) it carries a risk of encephalitis (inflammation of the brain).

What is the treatment?

Because rubella is such a mild disease, there is no specific treatment. However, patients should rest quietly until they feel well and take paracetamol for fever or aching joints.

School exclusion

The child is usually excluded until fully recovered or for at least 5 days from the onset of the rash.

What should you do?

- Notify your doctor immediately if the patient has a convulsion.
- Notify school authorities.
- Contact any pregnant women who have been exposed to the patient.
- If visiting the doctor, telephone beforehand in order to avoid exposure to pregnant women in the waiting room (if you think rubella is the diagnosis).

How can rubella be prevented?

The rubella vaccine should be given to all women before puberty. In Australia, it is routinely given to children at 12 months (combined with mumps and measles vaccines) and given again between the ages of 4 and 5. Older girls and women of childbearing age who have not had rubella should be immunised at least 3 months before becoming pregnant. In Australia, most women aged 15 to 45 are immune and therefore protected from rubella. However, the only way to tell is to have a special blood test.

Scoliosis

What is scoliosis?

Scoliosis (also called idiopathic adolescent scoliosis) is a lateral (sideways) curve of the spine. It usually develops during the growth spurt at 11 to 13 years.

How common is it and who gets it?

Scoliosis is common; about 2 to 3% of the population have it. The condition is present to a minor degree in 10% of the population, and 1 in 1000 people have it to a severe degree. It is more common in females (a 10 to 1 ratio compared with males). Although some cases develop in abnormal spinal conditions or disorders such as polio, the cause is generally unknown (hence the term 'idiopathic'). It tends to run in families.

What are the symptoms?

The signs of idiopathic scoliosis can sneak up on people so that they are often not noticed. The problem does not appear until after 10 years of age in a previously normal spine. As the curvature develops, subtle changes may be noticed—shirts and trousers may fit poorly and hemlines of skirts are difficult to level. Back pain is uncommon in scoliosis but can occur in more severe cases.

What are the problems?

With major degrees of scoliosis you notice:

- obvious curving of the upper body
- shoulders become uneven and rounded
- one shoulder is higher than the other
- the shoulder blade on one side stands out.

In extreme cases the lungs and heart can be compressed, leading to breathing difficulties. The worst feature for the patient is social embarrassment.

What are the diagnostic tests?

The screening test is the 'forward bend test' when the curvature and asymmetry (uneven sides) are obvious to the observer standing behind. This test is usually done with 12 to 14 year olds. An X-ray of the spine shows the S curvature and the Cobb angle is measured. This is the angle between the two main lines of direction of the curved spine.

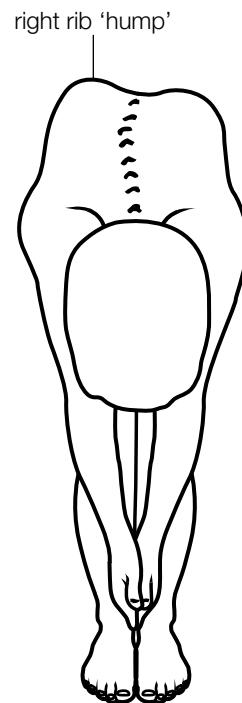
What can be done?

Most cases are minor (Cobb angle less than 10°), and simply practising good posture and having physiotherapy is all that is required. A brace can be used for those with a greater curvature; it will help to straighten the spine during the growing period of adolescence.

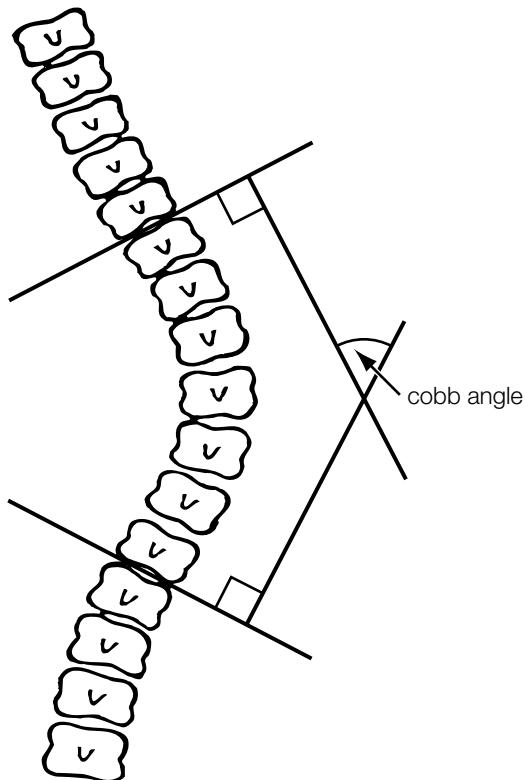
The general rules are:

- less than 20°—observe
- 20° to 40°—brace
- over 40° to 45°—operate.

Patients with significant scoliosis will be referred to an orthopaedic surgeon for an opinion.



Positive forward bend test showing difference between right and left sides



Lateral scoliosis as seen on X-ray

Seborrhoea in infants

What is seborrhoea?

Seborrhoeic dermatitis is a common skin inflammation that occurs mainly in the hair-bearing areas of the body, especially the scalp and eyebrows. It can appear on the face, neck, armpits and groin. In particular, it can cause nappy rash. If it affects the scalp it is called 'cradle cap'.

What are the symptoms?

Seborrhoeic dermatitis usually appears as red patches or blotches with areas of scaling. This becomes redder when the baby cries or gets hot. Cradle cap may appear in the scalp. A flaky, scurf-like dandruff appears first, and then a yellow, greasy, scaly crust forms. This scurf is usually associated with reddening of the skin.

Unlike eczema, it does not usually itch and irritate the child, who is usually comfortable, in good health and does not scratch. However, the dermatitis can become infected, especially in the nappy area, and this becomes difficult to clear up. If untreated, it often spreads to many areas of the body. It is said that 'cradle cap and nappy rash may meet in the middle'.



Typical distribution of the rash of seborrhoea

At what age does it occur?

Seborrhoeic dermatitis tends to occur during the first year of life, especially during the first 3 months. Many cases begin in the first month of life. It is rare to see it begin after 2 years.

What is the treatment?

Self-help

Seborrhoeic dermatitis can heal naturally by following a few basic rules. It is most important to keep the areas clean and dry by bathing in warm water, patting the area dry with a soft cloth and keeping the skin exposed to the air and sun (moderate amounts) as much as possible. Avoid using soap for washing.

For cradle cap, rub the scales gently with baby oil or olive oil and then wash away the loose scales.

For nappy rash, change wet or soiled nappies often, as soon as noticed. Keep the area dry and clean, exposing it to the air and sun for short periods several times a day. Do not wash in soap, use excessive powder or use plastic pants.

For the body, apply a thin smear of zinc cream to help mild areas heal and to prevent spread.

Medical help

If the problem is not settling with basic care, consult your doctor, who may prescribe a cream containing sulfur or salicylic acid, or a special stronger cream if necessary. A useful 'over the counter' preparation is Egozite cradle cap lotion.

Seborrhoeic dermatitis usually resolves by the age of 1 year.

Slapped cheek disease

What is slapped cheek disease?

Slapped cheek disease is a relatively common viral infection that is recognised by bright red cheeks as though they have been slapped. It is also called slapped face syndrome erythema infectiosum or fifth disease.

What is the cause of slapped cheek disease?

It is caused by the human parvovirus B₁₉. It is a different virus from the parvovirus that is seen in cats and dogs.

How is it spread?

It is spread from person to person by droplets travelling through the air from the nose or mouth of an infected person, especially from coughing and sneezing. It can also be spread by direct contact such as touching the infected person. It tends to occur in outbreaks in groups of people in the community, for example in schools.

The incubation period (period from contact to the appearance of symptoms) is from 4 to 21 days (average 7 to 14 days).

It is highly infectious until the rash appears and then it is non-infectious.

Who gets the infection?

It usually occurs in young preschool and school-aged children from 4 to 10 years but can occur at any age, even in adulthood. Six out of 10 people in the population have had the virus by the time they are adults.

It is diagnosed by an IgG blood test.

What are the symptoms and signs?

- A bright rash mainly on the face, arms and legs
- Feeling vaguely unwell
- Runny nose
- Mild fever (in about one-third of people)
- Aches and pains including stomach pains
- Pain in the joints (usually only in adults and older children)
- Enlarged glands (lymph nodes) in the neck

What is the nature of the rash?

At first the very bright red rash appears on the cheeks but leaves a pale area around the lips. After a day or so it appears on the arms and legs and also possibly on the trunk (chest and back). The rash lasts only for 2 to 3 days but may reappear on and off for several weeks. It is not unusual for the cheeks to become red again on exposure to sunlight or wind, or after a hot bath. This does cause concern for parents, but it is really nothing to worry about. The rash may be itchy.

How does it affect adults?

Adults tend to have a more severe illness, which can resemble rubella. The main features are a florid rash and arthritis.

What are the risks?

Slapped face syndrome is invariably a mild flu-like illness and many people don't even know they have had the virus. The main problems are its relapsing nature and the associated arthritis.

However, children with certain blood disorders (thalassaemia, sickle cell anaemia) and with leukaemia can get serious problems from the virus.

Contact your family doctor for advice if your child is taking long-term steroids or is on chemotherapy.

Another risk is to the fetus should a pregnant woman acquire it during pregnancy—but not if she has had a previous infection and is immune. It can rarely cause death of the fetus but there is no evidence that it causes birth defects.

What are the exclusion rules?

Exclusion from school or elsewhere is not necessary. Children can keep going to school or day care. Once you see the rash on the face, the infection cannot spread to others.

Children with blood disorders or leukaemia should avoid children with the infection.

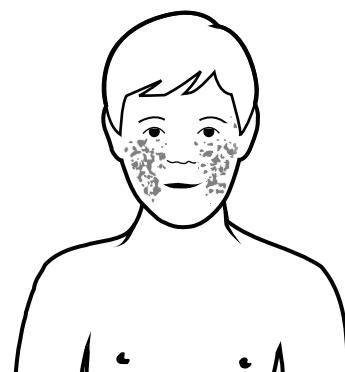
Pregnant women exposed to it should have a blood test and seek medical advice.

What is the treatment?

There is no special drug to treat the illness (antibiotics do not work) so the aim is to treat the symptoms.

- Drink plenty of fluids.
- Take paracetamol for fever and aches and pains.
- If itchy, daub with a soothing anti-itch lotion such as Pinetarsol or calamine lotion.
- Wear a broad-brimmed hat when outside.

Adults will probably need stronger analgesics or anti-inflammatory medication for arthritis.



Erythematous 'slapped' cheek appearance in well child

Sleep problems in children

What are normal sleep patterns?

Sleep problems in children are very common in late infancy, toddlers and early preschool. About 1 in 3 children have sleep problems at some stage. Most babies, in the early weeks of life, wake once or twice during the night, but by the age of 9 months they are usually sleeping through. At 1 year, babies will sleep on average 16 hours in every 24, including 2 or 3 hours during the day.

By the time they reach the toddler stage (18 months), children begin to vary considerably in the amount of sleep they need. Some toddlers will require little sleep and will wake up early. At least 30% of toddlers wake at least once during the night. Over 5% of toddlers and preschool children resist going to bed. By the age of 3 many children have become very active during the day and given up their daily nap. By the age of 5, nearly all children will be awake throughout the day. Toddlers begin to have dreams in the second year of life, coinciding with language development.

Tips for the child who won't settle at night

- Plan a bedtime routine (e.g. tell the child bedtime is coming, then organise undressing, bath, dress, story, tuck into bed).
- Be consistent and firm with the routine.
- As a rule take the child to bed while still awake.
- Once comfortable, leave the child and say that you will be back in a few minutes. Keep returning and checking until the child is asleep.
- Avoid over-reacting and ignore protests; if the child cries this will eventually stop if ignored.
- Make sure that others such as older siblings do not disturb them in their bedroom.
- Settling to sleep may be assisted by soft music, a soft toy and a gentle night light.
- Avoid further stimulation by running in and/or picking up the child if the child starts crying.
- Give security by gentle background noise to indicate your nearby presence.
- Avoid scolding the child.

Advice for sleeplessness, including waking at night

It is important for parents to agree to the approach and to share the workload. Explain to the child that he or she is going to stay in their own bed.

- Avoid giving attention to the child in the middle of the night—it encourages attention seeking and a dependence on it.
- Resist taking the child into bed during the night.
- If crying, let it continue for 5 to 10 minutes; if the child does not fall asleep, cuddle and comfort, and when the cries turn to sobs tuck the child into bed and give a goodnight kiss.
- Avoid extra feeding or other pacifiers during the night.

Advice where the child comes into the parents' bed at night

- Return the child to bed promptly and spend only a brief time to give reassurance.
- On reappearance be firm and return the child to bed.

Nightmares

Nightmares, which are scary dreams, are common over the age of 5. They are not true sleep disorders since they occur in deep sleep. In most cases they are caused by bullying at school, a disturbing incident or a scary story or TV program. The child wakes up fully, and comforting and reassuring the child is all that is required; the problem phase will pass. However, seek professional advice if nightmares are recurrent, frequent and follow a frightening experience.

Night terrors

Night terrors also occur during deep sleep. The child wakes in the middle of the night 'in terror', breathing rapidly and in a state of panic. The child may scream out, sit up and try to walk around. The child is usually inconsolable and has no memory of the event. It is not necessary to wake the child during the event. If they wake, put the lights on and reassure them that it is 'only a dream'. Night terrors usually develop within 2 hours of sleep and last 1 to 5 minutes. They can occur at any age but tend to cluster in two age ranges, 2 to 4 years and 6 to 9 years. Children tend to grow out of them; as a rule, night terrors cease after several months and have no long-term consequences.

However, if they are persistent and you are concerned, keep a diary of the events, discuss it with your child (if old enough) and seek professional help. Ask about any bullying or other bad experiences including graphic scenes on television or in the movies and counsel about this. Doctors are reluctant to prescribe medication but sometimes this may help.

Sleep walking

Sleep walking usually occurs from 4 to 8 years. It is not serious in itself but may be a sign of an emotional problem. It is best not to wake the child; gently guide him or her back to bed. Parents should ensure that the bedroom is uncluttered and safe and secure (e.g. fix a gate across the top of any stairs, secure windows). One recommendation is to wake the child fully 15 to 30 minutes before the most likely time of the episode for 7 days. Maintain a regular sleep schedule. Children usually grow out of it.

Persistent problems

Seek further professional advice if your child's sleep problems persist.

Snuffling infant

What is the cause of snuffling?

Snuffling is a commonly used term that refers to the sniffing sound caused by a child breathing through an obstructed nose. It is usually caused by a viral infection of the upper respiratory tract (airways), particularly the nose. The medical term for this is rhinitis. It is a common minor infection in adults but in children it causes considerable discomfort because the nasal passages are so small. The infection makes it difficult for a child to breathe through the nose. The virus is usually one of a number of viruses that cause the common cold.

Rhinitis and other so-called upper respiratory tract infections (URTI) are very common in infants from the age of 4 to 6 months upwards, although they can occur even earlier if children are exposed to the viruses at a younger age. A child can expect to get up to six episodes of URTI each year.

What are the symptoms?

- Nose blockage with watery, yellow or green mucus
- Coughing, sneezing
- Irritability with crying
- Feeding difficulty caused by the nose blockage

What are the risks?

It is usually not a serious problem and appears worse than it actually is, although you may not think so at the time. Sometimes infection with bacteria can develop, and so you should contact your doctor if there is:

- wheezing or other breathing difficulty, or the child is breathing rapidly
- an unusually high fever (over 39°C)

- vomiting or other unusual symptoms
- a pale or dusky appearance
- less activity or alertness than usual.

A pink, crying child is not as great a cause for concern as a pale, quiet, inactive child.

What is the treatment?

Since the problem is caused by a virus, antibiotics are unhelpful and so they are not prescribed unless a bacterial infection such as a middle-ear infection complicates the problem. Your doctor will be able to check your child's ears, throat and chest to determine if there are any such infections.

- Give the child plenty of fluids to drink, especially water.
- Keep the child warm.
- Give paracetamol syrup for fever (don't use aspirin).
- Rest the child at home and keep the child isolated, to prevent spread of the infection to other children.

A traditional natural treatment is to clear out the nasal blockage with a cotton bud dipped in saline (a teaspoon of salt added to 500 mL of boiling water and allowed to cool), then if necessary instill nasal saline drops or spray.

To reduce severe congestion and blockage, antihistamines and/or paediatric nasal drops or spray can be given—consult your doctor. (These drops should be used for only 4 or 5 days.)

If the runny nose and sneezing last more than a week, or if the symptoms recur at the same season every year, the child may have allergic rhinitis—a nasal allergy to a substance in the environment such as animal fur or pollens. In this case, consult your doctor.

Squint and loss of vision

What is squint (strabismus)?

Squint or strabismus is a 'turned eye' due to lack of coordination of the six muscles of each eye that control the focusing between the eyes. The two eyes therefore do not focus on the same object: one will focus on the intended object but the other looks somewhere else, usually inwards ('cross-eyes'), sometimes outwards ('walleye'), or even upwards or downwards.

When does it become obvious?

A squint is rarely obvious in the first weeks of life but tends to show up when the baby learns to use the eyes, from about 2 weeks to 3 or 4 months of age. However, it may appear later, even as an adult. Vision, which is present at birth, continues to develop until 7 to 8 years of age.

What are the main types of squint?

- Constant or true squint is one that is permanent—always present.
- Latent squint is one that only appears under stressful conditions such as fatigue.
- Transient squint is one that is noticeable for short periods and then seems normal.
- Alternating squint is one that changes between the eyes so the child can use either eye to fix vision.
- Pseudo squint is not a true squint but only appears to be one because of the shape of the eyelids.

A good way to pick a true squint from a pseudo squint is to observe the position of the light in the eyes when a torch is shone into them. This light reflex will be in exactly the same position in both eyes in the pseudo squint but in different spots with the true squint.

The two serious squints are the constant and alternating ones, which require early referral.

What are the risks?

If a true squint is not corrected before the age of 6, there is a danger that the 'lazy eye' will gradually lose vision from lack of use. This condition is called amblyopia. The golden rule is that a persistent squint needs early referral and correction. If treated early, the prospect of cure is excellent. Treatment commenced after the age of 7 is usually too late to save vision in the lazy eye. It goes permanently blind.

What is the treatment?

If one eye is 'lazy' (that is, not being used), it is standard practice to wear a patch (maybe on glasses) over the good eye for long periods in order to use the lazy eye and have

both eyes eventually capable of vision. The usual practice for a significant squint is surgery by an ophthalmologist to tighten and strengthen the muscles in the lazy eye to make it look normal and also to improve function.

General points

- The myth, 'a squint will usually correct itself', is untrue.
- True squints and alternating squints need referral and correction.
- The 'lazy eye' will become blind if not working by 7 years of age.
- Early surgical correction of a true squint, preferably at 1 to 2 years, is best.



Normal eye position (note the same position of the white light reflex)



Convergent squint (affected eye on right of page)



Divergent squint (affected eye on right of page)



Pseudo squint (due to shape of eyelids)

Stuttering

What is stuttering?

Stuttering is a common disorder of speech in which a person who clearly knows what he or she wants to say has difficulty expressing it fluently.

The flow of speech can be affected by one or more of the following characteristics:

- difficulty starting to speak (maybe a silent period)
- speech interrupted with silent pauses
- repeated words or sounds (e.g. 'I I I I think ...')
- prolonged words or sounds (e.g. 'How do you feeeeeel?'). There may also be associated body movements such as nodding of the head, shuffling of the feet, facial grimacing or blinking of the eyes.

Many children can have a temporary phase when the flow of speech is abnormal but most of these do not develop a stutter.

The exact cause of stuttering is unknown.

Who is likely to stutter and when?

- It usually starts in childhood between 2 and 5 years.
- Stuttering can affect anyone but certainly runs in families. Children of parents who stutter have a greater chance of stuttering.
- It occurs in all races and classes of society and therefore in all languages.
- About 5% of children will stutter at some stage of speech development, and stuttering will persist into adulthood in 1% of children.
- Stuttering is about 3 times more common in males.

Note: Some children who stutter may avoid speaking.

Is stuttering associated with other developmental skills?

Definitely not. As a rule stuttering is not related to intelligence. Generally development in other areas is normal. It is interesting to find that many people who stutter do not have problems with other oral presentations such as singing and whispering.

What factors affect stuttering?

Children are more likely to stutter when anxious, such as when facing a 'stage fright' situation, reading to a group, talking about an unfamiliar topic or in unfamiliar surroundings. Other factors include getting tired, excited, emotional or argumentative, being rushed to speak and competing to be heard. Having to use certain difficult words can also cause a fluency problem.

When is help required?

Up to 65% of children who stutter gradually improve with increasing self-confidence and maturity of their language skills. These children may not need treatment. If the stuttering persists beyond 12 months or so from when it started, it is unlikely to improve without special speech therapy and should be referred to a speech pathologist. Early treatment from the age of 2½ years is recommended, preferably at 2½ years but certainly before the age of 5.

Who provides specialist help?

Speech pathologists are trained therapists who assess and recommend specific treatment for your child. They may be in private practice or employed in hospitals or community health centres. Units to treat stuttering can be found in most capital cities. Check the internet or ask your doctor about speech pathology services and clinics.

What is the nature and success rate of the treatment?

Treatment involves training to develop fluency with an emphasis on constant feedback and reward for clear speech. The aim is to train the child to speak confidently and fluently. Excellent results are common, with up to 80 to 90% success rate. Treatment will require regular visits and the involvement of parents.

Dos and don'ts for parents

Do:

- praise your child for appropriate fluent speech
- be patient and ensure you listen to your child without interruption
- focus on what is being said rather than the process
- educate other family members to be tactful, patient and supportive
- repeat or paraphrase what is being said to encourage understanding and support
- reassure your child about any expressed concerns or frustrations.

Don't:

- draw inappropriate attention to the problem, especially to other people
- criticise your child for stuttering
- allow family members to tease or ridicule the child
- place your child in situations that could cause embarrassment
- talk along with them in order to correct or complete sentences
- interrupt the flow of speech.

Tantrums

What are childhood tantrums?

Temper tantrums are a type of behavioural disorder in children (especially in toddlers) whose protest to frustration is a dramatic reaction of temper. The tantrum can vary in time from as short as 20 to 30 seconds to as long as several hours.

The behaviour can include:

- kicking or stamping the feet
- shouting and screaming
- throwing things
- rolling around on the floor
- banging the head
- crying (without being hurt)
- holding the breath (which can be frightening).

Who gets tantrums and why?

Any child can throw them. They are a feature of the so-called 'terrible twos'. They usually start at 15 to 16 months of age (can be as early as 12 months) and may persist until 3 to 4 years.

Tantrums are more likely to occur if the child is tired or bored and feels angry or frustrated. Reasons for this frustration may include:

- They are told 'no'.
- Things don't go their way.
- They cannot manage more difficult tasks.
- They cannot express what they want to say.
- Mother leaves them even for a brief period.

Sometimes there is no obvious reason. Tantrums may continue to occur if the child gets what they want, often when parents or other carers reward them to seek peace and avoid conflict. An example of this is when your child picks out a toy from the shelf of a shop and demands 'I want it'. You say 'no' and return it. The child gets upset, grabs the toy and shouts 'mine, mine'. If you give in to avoid a scene and say 'you can have it just this time', the child gets the message that 'no' can mean 'yes' if they protest strongly enough. So if tantrums work, they are likely to recur.

What can be done?

If necessary, parents should seek expert advice. It is important to keep a record of the reason for the tantrums. Parents can be reassured that the tantrums are relatively common and not harmful. Remember the saying 'temper tantrums need an audience'. When ignored, the problem will probably get worse for a few days before it starts to improve. Plan ahead to prevent tantrums. Drugs have no place in the management of temper tantrums.

What are helpful rules to follow?

- Stay calm and say nothing.
- Look away.
- Move away.

- Ignore what can be ignored: parents should pretend to ignore the behaviour and leave the child alone without comment. This can include moving on to a different room and busying yourself with something else, but do not lock the child in his or her room.
- Be flexible: decide if the demands are reasonable before saying 'yes' or 'no' and stick to your decision.
- Avoid what is avoidable: try to avoid the cause or causes of tantrums, such as visiting the supermarket.
- Distract what is distractable: redirect the child's interest to some other object or activity that would interest them.
- Use 'time-out': consider firm action by taking the child to a safe room or space and insist they be quiet (usually for 2 minutes) before they come out of time-out.
- Make some realistic and firm rules to follow.
- Keep the child busy with activities in circumstances conducive to boredom and disruption.
- Praise appropriate behaviour as soon as it occurs.

What is a breath-holding attack?

The child holds their breath either during a tantrum or with a simple faint in response to a fright or pain (such as jamming a finger). In the case of a tantrum, they will let out a loud cry and then hold their breath.

They become pale and then blue, which is quite frightening, especially if they become unconscious; if this happens, they should be placed in the coma position (the child is turned onto the side with both knees slightly bent together and the lower arm pulled out behind them). The whole episode usually lasts 10 to 60 seconds and is self-limiting. The child will start breathing again. It is not harmful. These attacks occur in the age group 6 months to 6 years but are most common when children are 2 to 3 years.



Tear duct blockage

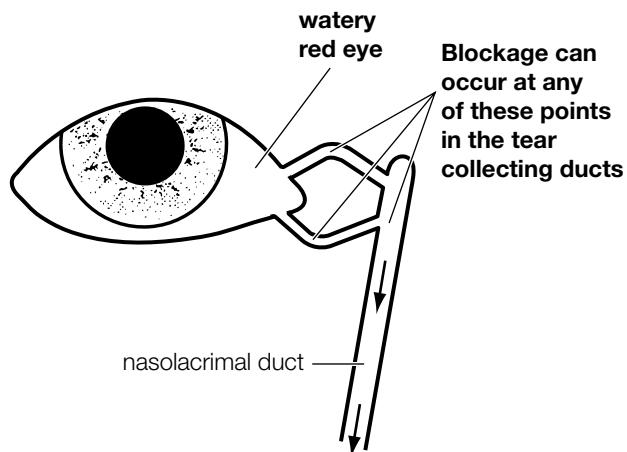
Blockage of the drainage of the tear ducts, sometimes causing infection, occurs in all ages but it is most common in children. Blockage due to narrowing of the drainage system for the tears is common in the elderly, especially in those exposed a lot to the weather (such as farmers). In these people, the eyes water easily, especially on exposure to wind.

What happens to tears?

Tears are continually produced in the lacrimal glands above each eyeball. These glands provide a thin film of watery fluid over the eyes. The tears drain by two very fine tear ducts situated on the inside corner of the eye (next to the nose). These lead into a much larger nasolacrimal duct, which drains into the back of the nose.

What causes blockage of tears?

The most common cause is inherited narrowing of the very fine ducts, causing blockage of the duct. It usually becomes obvious in infants between 3 and 12 weeks. It may affect one or both eyes. There may be a family history of blocked tear ducts. Other causes in older people include injuries to the eye, fractured nose, sinus infection and eye infection.



What are the symptoms in infants?

Excessive watering of the eye is the main sign. Mucus and yellow pus may appear in the tears. The discharge is worse on

waking. This may clear up or progress to become obviously infected, with tenderness, redness or swelling of the surface of the eye or the tear duct (shown by a red, painful swelling appearing in the skin beside the nose). In some infants, watering and discharge starts soon after birth because the tear ducts fail to open.

What can be expected?

In most cases, the problem improves by itself as all the body tissues grow and expand. Self-correction usually occurs from 6 months of age onwards or even earlier. Some cases are more severe and repeated infections are common. Conjunctivitis, which usually requires antibiotic drops or ointment, can develop. Warm soaks with cotton wool help soothe these cases.

How can it be helped simply?

The best method is for the mother or the baby's carer to massage the drainage ducts several times daily. This is done by firmly (yet gently) placing the tip of the little finger over the inside corner of the eye and stroking firmly downward to the outer tip of the nose.



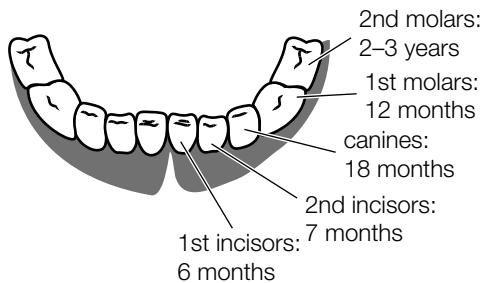
What is the treatment for persistent cases?

For more severe blockage or when eye watering has not settled by 12 months of age, the ducts can be probed and dilated under light anaesthesia. After dilation the tear-duct system is irrigated by forcing saline through a syringe into a fine blunt needle. This almost always solves the problem. Very rarely, an artificial duct will need to be fashioned surgically.

When does teething occur?

Baby teeth (milk or deciduous teeth)

- Babies usually cut their teeth from age 6 months until 2 to 3 years.
- New teeth continually erupt during this time.
- The first teeth to appear are the lower incisors (during the first year). These seldom give much trouble.
- The first and second molars (between ages 1 and 3) tend to cause problems.
- Usually the first set (20 teeth) is complete soon after the second birthday.
- Be prepared for variations—some babies have teeth (1 or 2) at birth, while others have none at 1 year. This has no significance.
- These teeth are lost between 6 and 12 years.



Lower set of 10 'baby' teeth and times when they usually appear

Adult teeth

- Permanent teeth may appear as soon as the baby teeth fall out.
- If they appear before this, the dentist may have to extract the baby teeth.
- Permanent molars appear later, at about 12 years.
- A full set is 32 teeth.

What are the symptoms?

- The gum is slightly swollen and red. This may cause little or no discomfort, or may be quite painful.
- The baby is more clinging and fretful than normal.
- The baby dribbles more than usual.

- The baby wants to chew on something (such as fingers).
- The baby is irritable and crying (on and off for no more than a few days).

• The baby has difficulty with sleeping.
• There may be an association with loose bowel actions. The problem usually settles quickly and it is important not to link coincidental illnesses such as fever, diarrhoea, vomiting, earache, convulsions, nappy rash and cough with teething.

Are pitted, dark teeth a problem?

Some children who are breastfed for long periods (such as 3 years) may develop unsightly pitting of the front surface of their teeth. This will not go away, but the parents should be reassured that the adult teeth will be normal when they appear.

What is the treatment?

Soothing methods

- Gentle massaging of the gum with the forefinger wrapped in a soft cloth or gauze pad is comforting. A gel such as Orased can be massaged into the gums every 3 hours if the problem appears to be extremely troublesome.
- Place a face washer in the freezer and allow the baby to chew on the cool washer.
- Allow the baby to chew on a clean, cold, lightly moistened face washer. (A piece of apple can be placed inside the face washer.)
- Give the baby a teething ring (kept cold in the refrigerator) or a teething biscuit.

Medication

Medicine is usually not necessary for teething. Paracetamol mixture should be used for any discomfort. For more severe problems, especially if they are affecting sleep, an antihistamine or a combined mixture of antihistamine and analgesic can be given at night. Your doctor can advise you about this.

Other measures

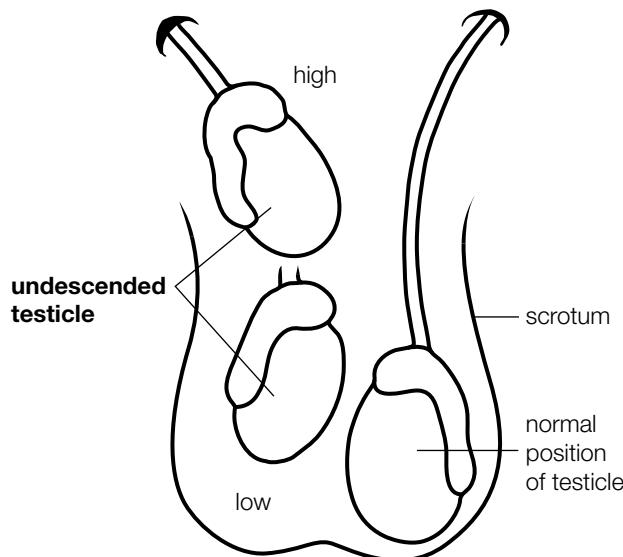
- Cleaning the teeth at first with a face washer and then with a small soft toothbrush can commence when they appear, especially after the eight incisors have erupted.
- Regular dental visits are advisable from about 3 years.
- Explain to children what they can expect about losing their first teeth.

Testicle, undescended

What is an undescended testicle?

It is a disorder of boys in which one or both of the testicles (the male sex glands) have not descended into their normal position in the scrotum. The testicles develop inside the abdomen in the fetus and start their descent through the abdominal wall so that it is usually complete by a month before birth. The testicles are attached to the body by long cords called 'spermatic cords'.

There are two types of undescended testicles—congenital (where boys are born with it) and acquired.



How common is it?

It is a very common problem, present in about 4% of newborn males and as many as 25% of premature males. The exact cause is not known.

What happens in infancy?

Many undescended testicles complete their descent during the first 12 weeks after birth but after 12 weeks spontaneous

descent is uncommon. One to 2% of testicles are still undescended at 1 year.

What are the symptoms?

Undescended testicles cause no symptoms. The condition is not painful and urination is normal. One notices that the scrotum appears undeveloped on the affected side and the testicle cannot be felt in its normal position.

What is an acquired undescended testicle?

This develops often after birth, usually between 1 and 10 years of age. Sometimes the testicles are present in the scrotum at birth but with the growth of the child the spermatic cord does not keep up with the general body growth. By about school age the testicles are undescended and sit high in the groin.

What are the risks?

If left untreated, there is an increased chance of reduced fertility and sterility in some males. This is apart from the psychological effects of the altered male self-image. The main concern is the risk of cancer in the undescended testicle, which is up to 10 times greater than normal. The cancer eventually develops in young adults between 20 and 40 years of age.

What is the treatment?

If the problem has not resolved in the first few months, early surgery is necessary to locate the testicle and bring it into the scrotum by freeing and stretching the spermatic cord to which it is attached.

The recommended ideal time for this surgery is between 6 and 12 months of age, with 12 months being the most popular time for surgeons to operate.

It is still acceptable to operate at 5 to 7 years if the diagnosis is delayed or the problem has developed since birth. However, it has been shown that the quality of sperm production diminishes from the age of 2 onwards in the undescended testicle. A hernia is often associated and can be corrected at the same time.

Thumb sucking

What does thumb sucking involve?

It involves placing the thumb or finger on the roof of the mouth behind the teeth (hard palate) and sucking with the mouth closed. It is basically a habit and should not be regarded as an abnormal disorder. It is one of the first pleasurable acts that the infant can manage.

How common is thumb sucking?

It is very common and occurs in children of both sexes up to the age of 12 years, but is most common in children under the age of 4 years.

What can bring on thumb sucking?

It usually starts for no apparent reason. The child tends to suck the thumb when relaxing, such as when watching television or when put to bed before going to sleep. It also tends to occur when the child is ill, hungry or tired.

Insecurity, such as the arrival of a sibling in the family, can increase thumb sucking; it can be related to an apparent withdrawal of parents' attention.

What are the risks?

Thumb sucking should be regarded as normal and usually settles by the age of 6 or 7. However, if it persists beyond this age it can cause problems with the permanent teeth, which begin to appear at about the age of 7. One effect is that the pressure on the front teeth may cause protrusion of these teeth (i.e. buck teeth).

How can it be prevented?

It is best to provide other comfort measures in infants if this habit is developing. Giving the infant a dummy (pacifier) is preferable. If the habit persists, avoid making it an issue and thus drawing attention to it.

What is the treatment?

No special medicine or diet is necessary.

What to avoid

- Nagging
- Punishment
- Scolding
- Gloves, mittens or arm splints
- Bad-tasting chemicals on the thumb or finger

What to do (for a child over 6 years)

- Carefully observe things that provoke thumb sucking.
- Find ways of avoiding these trigger factors.
- Provide extra attention.
- Organise pleasant distractions.
- Give praise and rewards for efforts to stop.

When to seek help

- If the problem persists after 6 years, especially if it is excessive and persistent
- If the child wishes to stop but cannot despite good efforts (even when offered rewards for good attempts to stop)

In such situations special counselling may be required. Sometimes the help of the dentist to fit a special training device in the mouth may be required.

Remember

Thumb sucking is usually a passing habit that most children grow out of by school age. Special treatment is rarely necessary. Avoid giving attention to the problem, but give plenty of attention to the child.

Toilet training your child

What is normal?

As a rule children will learn to use the toilet when they are ready.

The ages by which most are fully trained are:

- daytime—between 2½ and 4 years
- night-time—by 8 years of age.

Your child will have their own individual pattern and it is unwise to get upset if they seem slow compared with other children who may train very early.

General rules for parents

- Be relaxed about toilet training.
- Avoid rushing toilet training.
- Do not force your child to go to the toilet.
- Nagging does not work well.
- Punishing will not work.

When is your child ready for toilet training?

The rule is to start when your child shows signs that they are ready. These include:

- telling you they are wet or soiled
- being concerned about this
- showing an interest in the toilet
- wanting to sit on the toilet
- waiting or controlling the urge to wet or soil
- removing their pants or undressing
- soaking their nappies
- longer dry periods between wetting
- regular bowel movement pattern.

It is important not to start training if the child is unwell.

How long does toilet training take?

Children are different and vary—some learn quickly, others take a long time and you need to be patient. Once they start it usually takes about 4 weeks before they are dry, but some can take several months. Learning to pass urine is easier than opening the bowels on the toilet.

It is common for children who are dry during the day to wait to open their bowels when their nappy is on, especially during naps. Many still tend to accidentally wet or soil a year or more after starting training. It is good to work together with your child carers (e.g. day care, kindergarten).

What do you need?

It is best to use a toilet training potty. If you use the toilet you need a toilet seat ring and a solid step to support your child's feet.

Preparing your child

- Put your child in pants.
- Explain what the potty is for and let them sit on it. Work out their pattern of passing urine and faeces and sit them on the potty or toilet at these times when starting to train.
- Stop using nappies (except when sleeping).
- Use clothes that are easy to get on and off.

Training method

Choose a day when you are at home to begin telling them about the steps to follow, for example:

- Tell mummy or daddy.
- Go to the toilet or bathroom.
- Take off your pants.
- Sit on the toilet.
- Do a wee or a poo.
- Wipe yourself or ask someone to help.
- Flush the toilet.
- Wash and dry your hands.

Best times to sit them on the toilet

- First thing in the morning
- After meals
- When you sense their need to go
- Before going out
- Upon returning home

Special tips

- Give lots of encouragement and praise.
- Give your child lots to drink.
- Ask your child if they need to go.
- Sit your child on the toilet for about 5 minutes, but don't force them.
- Help your child to relax on the toilet.
- Teach your child to wash their hands.
- Handle 'accidents' calmly and use the opportunity to teach the toileting steps.
- Get boys to sit on the toilet at first to urinate.
- Dad can show boys how to urinate while standing.
- Keep nappies on at night until they stay dry.
- If the training upsets them, wait for a month and try again.

Key points

- Use a potty, or a toilet with a seat ring and a step.
- Explain the process in simple terms.
- They will learn to use the toilet when they are ready.
- Sit both boys and girls on the toilet to pass urine.
- Do not force them if they refuse to use it.
- Make a fuss of success—praise and reward them.

Umbilical hernia

What is an umbilical hernia?

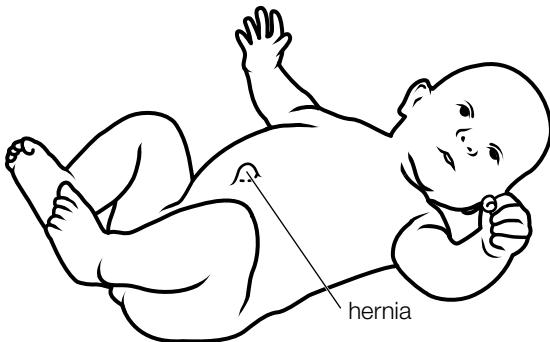
Umbilical hernias are very common in babies. It is a bulge of soft tissue covered by skin in the umbilicus (navel) of a baby. It is the site where the blood vessels in the umbilical cord joined mother to baby. There is a delay in the closure of the opening in the muscle of the abdomen.

What are the symptoms?

The hernia rarely causes any problems to the baby. Parents may be concerned when the hernia bulges further with crying.

What are the risks?

Because the opening of the hernia is wide, there is hardly any risk of strangulation of the bowel.



Umbilical hernia

What happens normally?

The hernia gradually becomes smaller as the baby grows and the hole becomes smaller. Most hernias have disappeared

within 12 months, while the larger ones usually disappear by the age of 4. If the hernia has not disappeared by the age of 4 or 5, a minor operation to remove it may be necessary.

What is the treatment?

No special treatment is required and the hernia is left to settle naturally. The old-fashioned method of taping a coin over the lump is not necessary and is not advised.

The operation

If the hernia is still present at 4 to 5 years, surgery may be advisable, and the child can be referred to a surgeon. The operation involves simply placing a stitch (rather like a purse string) in the hole to close it over. The scar will hardly be noticeable and is usually invisible in adults.

There are no stitches to be removed afterwards. The child comes in as a day patient and will not have to stay overnight under normal circumstances. Children cope and recover much better than do adults with these operations and will be able to carry on with their normal activities the day after the operation.

Key points

Umbilical hernias:

- are common in infants
- do not require treatment
- usually go away by 4 years of age
- can be corrected by a simple operation if necessary.

Urine infection in children

What is urine infection?

A urine infection is an infection caused by bacteria that get into the urinary tract system where they grow in the bladder (called cystitis) and sometimes in the kidneys (called pyelonephritis).

It is common in children, especially under the age of 5 years.

By the age of 10 years, about 3% of boys and 10% of girls will have had at least one episode of a urinary tract infection.

What are the symptoms?

The infection is similar for children and adults but the symptoms and diagnosis are not as clear-cut in children as they are in adults. For example a baby with a urinary tract infection may simply seem unwell, have an unexplained fever and feed poorly. Children under 2 years (and perhaps 3 years) of age cannot convey a symptom of stinging pain on urination. On the other hand, older children are likely to have a fever and complain of symptoms on urination including poor control.

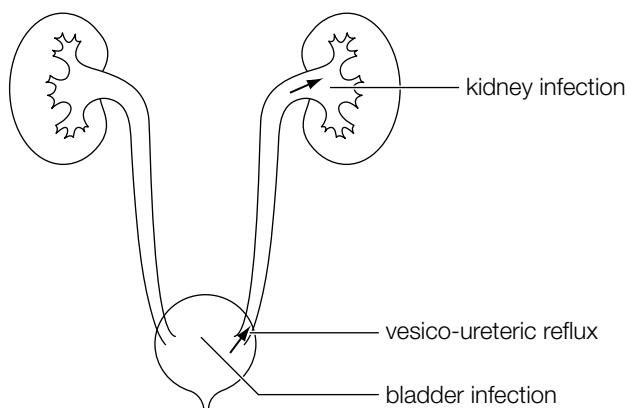
Symptoms in children over 3 years of age

- Dysuria—stinging pain on passing urine
- Frequency of passing urine
- Urgency to pass urine
- Accidentally wetting their pants
- Wetting bed at night
- Loss of appetite
- Fever

Parents may notice that the urine is smelly but it does not necessarily mean that an infection is present.

What are the risks?

There are few risks from one or two isolated infections but there is a risk of serious infection travelling up from the bladder via the ureter to the kidneys. This is likely to occur if



Vesico-ureteric reflux can cause a bladder infection to travel up to the kidneys

the child has a condition called vesico-ureteric reflux, where the valve from the bladder to the ureter is open and the urine refluxes from the bladder upwards from time to time. This is serious, as it may cause kidney infection, scarring and damage. Another serious risk is infection in the blood stream (septicaemia) from the bacteria.

Collecting a urine specimen

It is essential to collect a urine specimen for a suspected infection so that we know exactly what bug we are dealing with and what antibiotics will kill them. Furthermore, urine infections are prone to recur and we need to be prepared for further episodes. Getting a sterile specimen is important since urine is prone to contamination from the outside. The collection of a sample using a stick-on collecting bag is not acceptable.

The methods used are:

- a 'clean catch', which can only be managed by a very experienced person
- a sample from a fine catheter passed into the child's bladder
- drawing urine out of the bladder by a needle passed through the abdomen over the bladder (for the best specimen).

What is the treatment?

After the urine is collected, the child may be started on oral antibiotics recommended as those most likely to be effective before the test results are available. However, they may need to be changed if the bacteria are found to be resistant to them on culture and sensitivity testing, which may take the laboratory 24 to 48 hours to process.

It is important to complete the course of antibiotics as directed by your doctor. Some children may need antibiotics through a drip in a vein.

The child should drink extra fluids to flush out the urinary system and empty the bladder and bowels completely when they go to the toilet.

What further tests will be needed?

As a rule all children, boys and girls, presenting with a urinary infection require investigation, especially to test for reflux. Most children will require an ultrasound test, while others may require more sophisticated scans such as a micturating cystogram or a DMSA kidney scan.

What is the outlook (prognosis)?

In most cases, the outlook is excellent as in many a urine infection is a 'one-off' event. The infection usually clears away and the child recovers fully. However, some have recurring infections and require ongoing courses of antibiotics. If an anatomical problem such as reflux is present, it can be corrected by surgery.

Viral skin rashes in children

What are viral skin rashes?

A viral skin rash is an acute outbreak of a red rash on the body. The rash is part of the illness associated with a generalised viral infection.

In the past, a red rash in a child was usually due to one of the 'big three'—rubella virus, measles virus or scarlet fever. Now the rashes are commonly caused by other viruses. Note that scarlet fever is caused by a streptococcal bacterial infection.

What are the effects on the child?

The rashes described here—not measles, rubella (German measles) or scarlet fever—are usually mild and do not cause any distress to the child. The rash usually lasts for a few days before disappearing without any ill effects.

Apart from having the rash, the child may feel unwell with fever and display a lack of interest and loss of energy. Sometimes diarrhoea and a snuffy nose can occur.

What are the risks?

Complications of these infections are very rare in healthy children and almost always the problem is mild. Most children go about their normal play as though nothing is wrong. Febrile convulsions (fits or seizures) can occur with high fever.

Is the problem contagious?

These viral illnesses are mildly contagious, especially fifth disease (slapped cheek disease), which can occur in outbreaks at schools and among members of the same family. The virus usually spreads from person to person by close contact, mainly by the breath.

What are the main types?

There are three main types, which are simply called fourth, fifth and sixth disease. The term 'disease' is not a good one, as they are not really diseases.

Fourth disease

This common problem can be caused by a number of viruses, especially those affecting the bowel. The rash is so much like rubella that it is often misdiagnosed as rubella. However, unlike rubella, it is not concentrated on the face and neck. It mainly occurs on the trunk (body), is usually not itchy and often fades after 2 days. It tends to occur in preschool children.

Fifth disease

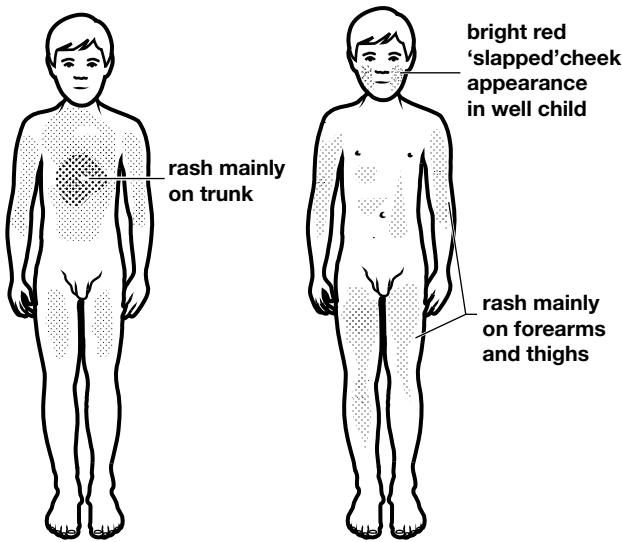
This is an interesting problem, and is also called erythema infectiosum, slapped face syndrome or slapped cheek disease. It is caused by parvovirus B₁₉. A bright red rash appears on the face first (giving a slapped face appearance), and then after a day or so appears on the arms and legs. The rash lasts for only a few days but may recur on and off for a few weeks. It is a mild illness but can have serious effects on the fetus if acquired during pregnancy. The infection usually occurs in young school-aged children.

Sixth disease

Sixth disease (also known as roseola or roseola infantum) usually affects infants at the age of 6 to 24 months. It has a classic feature in that the child develops a high fever and runny nose and as soon as the fever settles a bright red rash appears, mainly on the trunk. It is uncommon on the face and limbs. The rash lasts only about 2 days. Sixth disease appears to be a common cause of febrile convulsions (seizures due to fever).

What is the treatment?

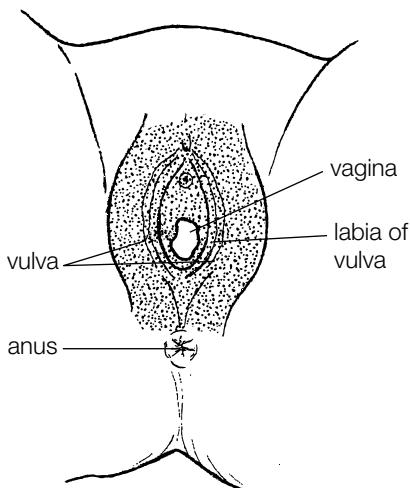
Treatment is very simple. Give paracetamol for the fever. The rash does not require any special treatment as it tends to fade rapidly. If the rash appears to cause discomfort, soothe the child with a tepid bath with Pinetarsol or sodium bicarbonate (half a cup to the bath water). Get the child to drink lots of fluids.



Vulvovaginal irritation in children

What is vulvovaginitis?

Vulvovaginitis is inflammation of the skin of the external genital region in women. It is a type of dermatitis that involves the vulva (the soft genital area that surrounds the vagina) and also the vagina itself. It is referred to as a non-specific infection because there is usually no specific responsible bug, including thrush.



Typical area of inflammation (shading)

Vulvovaginitis in children

Vulvovaginitis can affect women of any age but it is particularly common in young prepubertal girls, especially between the ages of 2 and 8 years. The skin of the vulva and vagina is thin and poorly developed at this age and is susceptible to the action of bugs (germs) from the skin and the anus.

What is the cause of vulvovaginitis?

It is usually due to minor infection from the bugs in the area and to sensitivity to various irritants such as soaps and urine. The following factors contribute to the problem:

- a thin, sensitive skin, which is a feature in some girls
- irritating things such as soap, urine and faeces
- moisture and humidity
- wet bathers
- lack of hygiene
- dribbling of urine especially in obese girls
- frequent self-handling including masturbation
- eczema in children prone to it.

What are the symptoms?

- The main symptom is recurrent episodes of discomfort and soreness.
- Another is mild stinging on passing urine (this is often confused with a urinary infection in which passing urine

is usually burning and painful. It is important for your doctor to check the urine to make sure).

- There may be a smelly vaginal discharge, or more commonly a slight yellow discharge may be seen on the underwear.
- Another symptom is itching, which causes the child to scratch the genital area, thus aggravating the problem.

What are uncommon causes?

There are some important underlying subtle causes to keep in mind with vulvovaginitis in children. These include:

- a foreign object in the vagina such as a small toy—this should be considered if the discharge is heavy
- sexual abuse
- pinworm, also known as threadworm—this should be considered especially if there is considerable scratching at night.

What are the risks?

Vulvovaginitis is a common and generally harmless condition. One complication is adhesion of the labia, where the inner folds of the vulva stick together, but this is easily treated. It is important to seek medical attention if there is painful urination (which suggests infection of the bladder), excessive scratching (check the anal area one hour after going to sleep for worms) or a heavy, perhaps blood-stained discharge (indicates deeper infection).

What is the treatment?

Attention to good hygiene is the first line of treatment. The child should have regular warm baths followed by careful drying. It is helpful to soak the child's bottom in a warm, shallow bath containing half a cup of white vinegar. Alternatively, bicarbonate of soda (baking soda), 10 grams to 10 litres of warm water, can be used.

- Soothing creams should be applied about 3 times a day. Any used for nappy rash are suitable but two recommended ones are zinc and castor oil cream, and Egoderm ointment.
- If a powder is required use zinc oxide (e.g. Curash).

How can it be prevented?

- Attention to bathing and drying as described above.
- Teach good toileting practice under parental supervision.
- Dress the child in cotton underwear and with loose-fitting clothing.

The following should be avoided:

- perfumed soaps
- bubble baths
- soap residues after bathing
- sitting in wet swimming costumes (change immediately after swimming)
- synthetic underwear
- getting overweight.

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What is acne?

Acne is inflammation of the sebaceous (oil) glands of the skin, causing an outbreak of pimples (zits). At first these glands become blocked (blackheads and whiteheads) and then inflammation can lead to red bumps (papules), yellowheads (pustules) and even deep, tender cysts.

Acne is a common disorder of adolescence. It appears usually on the face, but can extend onto the neck, arms, chest and back.

What is the cause?

Acne is related to the increase in the levels of male hormones during puberty in both sexes. Although the increase in hormone levels is normal, some people seem more sensitive to it.

Bacteria on the skin grow in the blocked gland and release fatty acids, which are irritating and set up inflammation.

Who gets it?

Most young men aged 13 to 18 will get acne. It is worse in males aged 18 to 19. It is slightly less common in girls, although they get it at a younger age; for them it is worse around 14 years and around period time.

When will it settle down?

It usually settles by the age of 20, but may continue longer in severe cases.

Important facts about acne

- It is not usually affected by diet.
- It is not infectious from one person to another.
- Ordinary chemicals (including chlorine in swimming pools) do not make it worse.
- Blackheads are not dirt, and will not dissolve in hot, soapy water.
- It may flare up with excessive stress such as at exam time or with relationship problems.

A word to parents

Your son or daughter hates acne and finds it embarrassing. It is not due to the way the skin is washed or what is eaten—it just happens.

It will not help if you are overanxious and nag your child; give support and encouragement instead, especially in following your doctor's instructions.

What is the treatment?

This varies according to the severity and persistence of the problem and the person's skin type. Severe cases require specialist referral.

Diet

Some people may find certain foods such as lollies, chocolate or milk aggravate their acne, but the scientific evidence is poor

and special diets are not advised. However, have a sensible, nutritious low-glycaemic-index (GI) diet.

Soap and washing

Cleaning the skin does help. Special soaps are unhelpful. Use a low-irritant soap or mild skin cleansing agent and wash gently 2 to 3 times a day—do not scrub.

Cosmetics

Avoid oily or creamy cosmetics and all moisturisers. Use cosmetics sparingly. Water-based lotion-style cosmetics are preferred. Remove makeup before bedtime.

Hair washing and shampoos

Keep the hair relatively short and clean (not too oily). Try to keep hair off the face and neck as oil aggravates acne.

Blackhead removal

This is not recommended; avoid picking and squeezing. This can make the pimples worse and lead to scarring.

Exercise

This is not of proven value in treating acne but is good for general health.

Ultraviolet light

Sunlight can be beneficial. However, avoid overexposure to ultraviolet light, whether in natural sunlight or solariums. (This includes avoiding sunburn by using a light, oil-free 30+ sunscreen.)

Lotions, creams and gels

Many preparations are useful. These include sulfur, salicylic acid, azelaiic acid, benzoyl peroxide and retinoic (tretinoin) lotions. Stop using any preparations that make the skin dry and irritated. Talk to the pharmacist or doctor about buying over-the-counter preparations.

Antibiotics

Those taken by mouth are of proven value, especially long-term tetracyclines. Topical antibiotic preparations are also effective. Consult your doctor for advice.

The pill

Women who have acne and require oral contraception can benefit from some pill preparations. Ask your doctor.

Remember

- Do not squeeze blackheads or other acne lesions.
- Eat a healthy diet.
- Use a mild, skin-cleansing product and avoid excessive washing.
- Avoid overexposure to the sun.

Depression in teenagers

The extent of the problem

Research reveals that 3% of Australians aged between 3 and 16 years have a depressive disorder each year. Major depression affects an estimated 8% of Australian teenagers, with about 60% experiencing suicidal ideas and up to 35% making a suicide attempt. The distressing problem of suicide is the second most common cause of death in this age group. Females attempt suicide about 14 times more than males, but males complete suicide 4 times more often. It is a national concern and needs to be taken very seriously in children. The incidence of depression increases markedly after puberty, especially in females.

Types of depressive disorders

There is a whole range of types of depression varying from sadness to feeling blue or down in the dumps to the extreme sadness and hopelessness of major depression.

The main types of depression are:

- depressed mood—feeling sad or blue is a minor, virtually normal, state that we get from time to time, but we still manage to carry on with life
- dysthymia—a moderate state of depression in which mood is persistently low so that it interferes with a person's ability to function normally with their life, including study and enjoyment
- major depression—the so-called 'black dog' or 'black hole'; this is a serious illness that leads to a dysfunctional life with a breakdown of the basic drives, namely energy, eating, sleeping, sex and enjoyment. These people are at risk of suicide.

What are the symptoms and signs of major depression?

The following are typical characteristics:

- persistent sadness
- severe sleeping problems
- eating disorders and weight changes
- apathy towards friends, school and family
- sense of worthlessness
- difficulty concentrating
- deterioration in school performance
- crying and emotional ups and downs
- complaints about physical symptoms such as headache
- persistent boredom and low energy
- acting out and risk-taking behaviour
- preoccupation with death and dying
- suicide attempts (called parasuicide).

Risk factors

- Depression in a close relative
- Major life stress (examples follow)

- Recurrent stresses
- Bullying
- Broken relationship
- Child abuse
- Family break-up
- Substance abuse (e.g. alcohol, marijuana)
- Social isolation—due to race or sexuality
- Sexual maladjustment
- School failure
- Health problems
- Unemployment

How to help a depressed teenager

- Listen to them and be alert to what they are saying and not saying.
- Treat them with respect.
- Take their problems and depression seriously.
- Offer unconditional love and support.
- Be available to help when requested.
- Be flexible and consistent.
- Encourage them to express their true feelings.
- Encourage them to do things that they enjoy.

Advice for parents, carers and friends

Follow the above guidelines. Encourage your child to get help without nagging or being judgemental (this includes talking things over with friends and people he or she is close to, respects and relates to). Ask people close to you for advice and support. Do not cling to your child or show too much concern. Look closely at your own management style and skills and ask yourself whether you could improve or alter your approach.

Take any talk about self-harm, including suicide, very seriously and make sure your child's environment is safe.

Professional support

Ask your general practitioner for help and, if possible, encourage your child to see that it would be in his or her best interests to get help. The excellent treatments available include counselling and antidepressant medication, if necessary.

Getting help

- Headspace: www.headspace.org.au
- beyondblue Infoline: 1300 22 4636
- Kids Helpline: 1800 55 1800

Eating disorders

The main eating disorders are anorexia nervosa, bulimia nervosa and binge eating. At least 6 in 100 Western women have an eating disorder, with 1 in 100 having anorexia nervosa, at least 1 in 100 having bulimia nervosa and about 4 in 100 having a binge-eating disorder. They are more common in females but males can be affected, and they occur in people from all backgrounds. They have serious emotional and physical effects and can be life threatening.

What is the cause of eating disorders?

The cause is not clearly known but may include social or cultural factors such as the influence of the media, family factors including parental standards, and genetic factors. In some cases a deep-seated emotional problem based on past experience such as sexual or emotional abuse as a child may be a significant factor.

Anorexia nervosa

Anorexia nervosa is a condition of obsessive desire for thinness through dieting, leading to extreme weight loss. There is a refusal to eat adequately and to have a normal body weight. There may be more to the problem than food.

Typical features of anorexia nervosa

- A disorder of females—adolescents and young adults
- A refusal to eat or eating less
- Poor body image/low self-esteem
- Intense fear of becoming fat
- Loss of body fat
- Loss of at least 15% of body weight
- No or very scant periods
- Dry and scaly skin
- Tendency to exercise obsessively
- Serious health problems (e.g. bone and organ damage)
- Serious social effects
- High mortality rate

Who gets it?

It is a disorder of adolescent girls, starting at puberty, with an incidence of 1 in every 200 16-year-old schoolgirls. It can affect young men. There are two common age groups when it comes on: 13 to 14 and 17 to 18.

About 40% of people with anorexia will later develop bulimia.

Bulimia nervosa

Known as ‘binge-purge’ syndrome, bulimia is recurrent episodes of binge eating in secret, followed by self-induced vomiting, fasting or the use of laxatives and fluid tablets (diuretics).

Typical features of bulimia nervosa

- A disorder of young females
- Begins later than anorexia nervosa—usually 17 to 25 years

- Binges of high-kilojoule, easily digested food
- Fluctuations in body weight
- Repeated attempts to lose weight
- Irregular periods
- Depressed mood with guilt after a binge
- A sense of lack of control during an eating episode
- Excessive exercise

Risks

- Complications of frequent vomiting (e.g. dental decay, salt and fluid loss)

Binge-eating disorders

This is the eating of larger amounts of food than a normal person would eat in a given period. Some people may binge once a day while others may binge many times a day. It is similar to bulimia except that self-induced vomiting and the use of laxatives to reduce weight does not occur.

Typical features of binge-eating disorders

- Secretive and impulsive eating
- Eating foods easy to swallow, high in kilojoules and usually forbidden at other times
- Most patients are obese
- Eating episodes occur in the absence of hunger
- Fear of loss of control
- Binges triggered by feelings of sadness, anger, anxiety or paranoia
- Binges average 2 days a week for 6 months

What is the treatment?

Early detection followed by action to help is the best approach. Problems with family relationships are often behind the disorders, so it is important to talk through any underlying problems such as a conflict or crisis at home, sexual abuse, physical abuse or drug dependency (including alcohol). Feelings of insecurity, rejection or guilt are common, so it is therapeutic to bring out these personal problems into the open. There is often a history of being teased at school about weight. People with eating disorders are usually very lonely people and have difficulty expressing their feelings.

If there is severe anorexia nervosa (e.g. severe emaciation, risk of suicide), special care in hospital is needed. Patients need a balanced diet tailored to the individual person, with at least 9000 kilojoules a day for those with anorexia nervosa. An expert, such as a dietitian, can educate the patient about an appropriate diet.

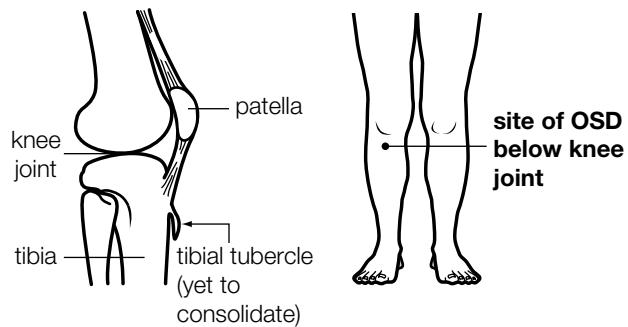
Sufferers need professional assistance and help, especially from the family, who should not be critical of the child’s appearance or behaviour. Parents should set a good example by their own eating and dieting behaviour. The earlier treatment is obtained, the better the outcome. Speak to your general practitioner about the problem in your family.

Osgood–Schlatter disorder

What is Osgood–Schlatter disorder (OSD)?

It is a short-lived problem of the leg at the knee, in which a painful lump affecting the bone develops in early adolescence during a period of a growth spurt, associated in particular with considerable physical activity. The area of bone affected is the tibial tubercle, which is a prominence just below the knee joint. It is a growing centre for this long bone of the lower leg.

This common disorder was described independently by two surgeons in 1903, namely Robert Osgood of Boston, United States, and Carl Schlatter of Zurich, Switzerland.



What are the signs and symptoms?

- A swollen, warm and tender bump below the kneecap
- Pain in this area during and after activity
- Pain aggravated in sports involving kicking, running and jumping, such as basketball, football and gymnastics
- Pain reproduced by attempts to straighten the bent knee against force, such as jumping or weight-lifting
- Pain aggravated by kneeling down and going up and down stairs
- It usually affects one knee but about 1 in 3 patients will have both knees affected

The diagnosis is usually obvious but can be confirmed by an X-ray which shows a gap in the tubercle.

Who gets Osgood–Schlatter disorder?

It is a feature of early adolescents between the ages of 10 and 18, being most common in the 11 to 14 age range. It is

uncommon after age 16. It affects both sexes but is 3 times more common in boys than in girls.

What is the cause?

There is usually no history of preceding injury such as a fall or bicycle accident. It is caused by the stress of constant traction on the immature tibial tubercle by the patellar tendon from sporting activity and running or jogging. This friction effect causes inflammation.

What increases the risk for the disorder?

- Over-enthusiastic action routines (e.g. running, jogging, jumping)
- Being male and aged 11 to 16
- Being overweight
- Rapid bone growth

What is the usual outcome?

It is a temporary self-limiting condition that usually heals over 6 to 18 months, with an average of 12 months. Sometimes recovery may be delayed, especially in those who continue sporting activity, until bone growth ceases. The end result is a prominent painless tubercle.

What can be done?

The best treatment is rest from sporting activity to prevent pain and allow healing. Apart from running, other activities such as cycling and football should be restricted. Any activity that induces pain should be avoided during the healing phase. For acute pain use ice packs and basic analgesics. A cushioned kneepad is helpful if kneeling hurts. Warm compresses or heat packs can provide relief after the acute phase settles. Supervised quadriceps exercises involving stretching can promote healing. Avoid cortisone injections and immobilisation in plaster casts. Rarely, a small operation is necessary to remove an irritating piece of bone that has not healed.

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Understanding the adolescent

Adolescence is a difficult period in which the young person is trying to cope with the inner conflict of striving for independence while still relying on adult support. There are inevitable clashes with parents, especially during the turbulent years of 13 to 16.

What are the hallmarks of the adolescent?

- Self-consciousness
- Self-awareness
- Self-centredness
- Lack of confidence

These basic features lead to anxieties about the body, and so many adolescents focus on their skin, body shape, weight and hair. Concerns about acne, curly hair, round shoulders and obesity are very common.

There are usually special concerns about boy-girl relationships and maybe guilt or frustration about sexual matters. Many adolescents therefore have a lack of self-worth or a poor body image. They are very private people, and this must be respected. While there are concerns about their identity, parental conflict, school, their peers and the world around them, there is also an innate separation anxiety.

What are the needs of adolescents?

- 'Room' to move
- Privacy and confidentiality
- Security (e.g. stable home)
- Acceptance by peers
- Someone to 'lean on' (e.g. youth leader)
- Special 'heroes'
- Establishment of an adult sexual role
- At least one really good personal relationship
- Respect

How does rebelliousness show?

It is quite normal for normal parents and normal teenagers to clash and get into arguments. Adolescents usually have a suspicion of and rebellion against convention and authority (parents, teachers, politicians, police and so on). This attitude tends to fade after leaving school (at around 18 years of age).

Common signs are:

- criticising and questioning parents
- putting down family members or even friends
- unusual, maybe outrageous, fashions and hairstyles
- experimenting with drugs such as nicotine and alcohol
- bravado and posturing
- unusual, often stormy, love affairs.

Signs of out-of-control behaviour are:

- refusal to attend school
- vandalism and theft
- drug abuse

- sexual promiscuity
- eating disorders: anorexia, bulimia, severe obesity
- depression.

Note: Beware of the risk of suicide if there are signs of depression.

What should parents do?

Wise parenting can be difficult, because one cannot afford to be overprotective or too distant. A successful relationship depends on good communication, which means continuing to show concern and care but being flexible and giving the adolescent 'space' and time.

Authoritative parenting

This approach is widely regarded as important to provide security during the transition to adulthood. It involves being firm and demanding of mature responsible behaviour while still being warm and nurturing. It also involves challenging moodiness gently, challenging negative thinking, encouraging positive social skills and dealing with conflicts constructively.

Important management tips are:

- Treat adolescents with respect and love.
- Be non-judgemental.
- Stick to reasonable ground rules of behaviour (e.g. regarding alcohol, driving, language).
- Do not cling to them or show too much concern.
- Listen rather than argue.
- Listen to what they are not saying.
- Be flexible and consistent.
- Be available and responsive to help when requested.
- Give advice about diet and skin care.
- Talk about sex and give good advice, but only when the right opportunity arises.
- Know the right questions to ask and where to seek help in a crisis.

Healthy distraction

Most authorities say that the best thing to keep adolescents healthy and well adjusted is to be active and interested. Regular participation in sporting activities and other hobbies such as bushwalking, skiing and so on with parents or groups is an excellent way to help them cope with this important stage of their lives.

Remember

Adolescent problems are a passing phase. Some authorities say it ends at 18 or 19, while others claim the 'age of reason' is reached at 23 or 24!

Understanding your menstrual cycle

What is the menstrual cycle?

When we talk about the menstrual cycle the first thing many of us think of is 'periods'. The period (menstruation) is just part of a continuous cycle of changes in the body that is regulated by hormones.

The cycle usually begins during the teenage years and continues until the menopause, at about the age of 50. The purpose of the menstrual cycle is to prepare the body for reproduction.

What is the normal cycle?

The menstrual cycle can vary from woman to woman. For some it is normal to have a shorter cycle (e.g. 21 days) and for others a longer cycle (e.g. 35 days). The average for all women in the world is 28 days.

This means that the time of ovulation varies, but the average is the 14th day.

The periods can last from 1 to 8 days, with the average being about 4 to 5 days.

What causes irregularity of the periods?

The cycle will vary in a woman from time to time. This can be the result of hormonal fluctuations, emotional stress,

illness, travel, sudden weight change or the use of some medicines.

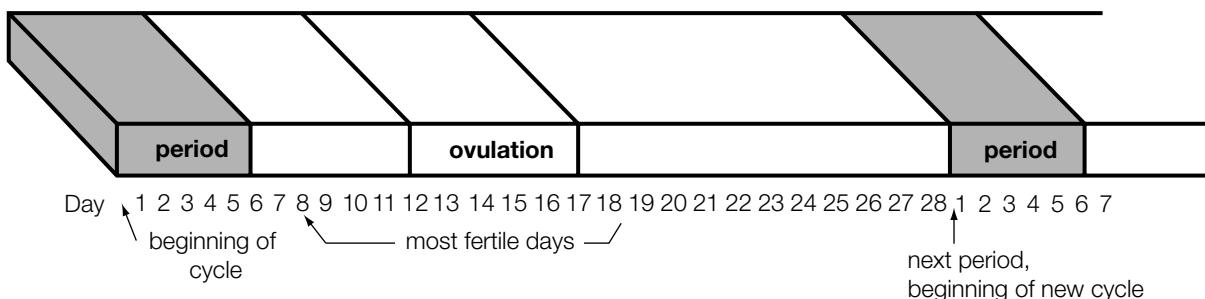
What are some of the problems?

Many women will experience problems with their menstrual cycle at some time. The most common problems are period pain, premenstrual tension, irregular periods and very heavy periods.

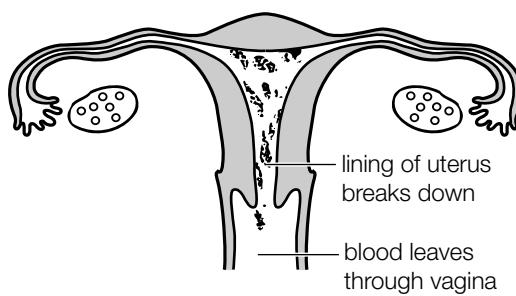
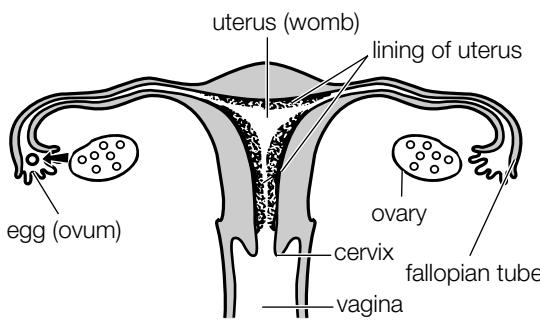
If you have any problems or questions about your menstrual cycle, discuss them with your doctor.

When is pregnancy likely to occur?

You are most likely to get pregnant between the 8th and the 18th day, depending on when you ovulate and how long the sperm remain active. It is useful to know when you ovulate—you may feel a pain in the abdomen and notice that your vaginal mucus changes from jelly-like to watery. Intercourse at this time and for the next 2 days is most likely to result in pregnancy.



Stages of the menstrual cycle



(a) Ovulation

- Ovulation occurs usually from day 11 to 17 (average day 14).
- Up to this time the hormones have been preparing the lining of the uterus to receive the embryo if the egg is fertilised.
- This lining gets thick and full of blood.

(b) Menstruation

- If fertilisation (pregnancy) does not occur, the lining of the uterus is no longer required.
- It is shed through the vagina.
- This is called the menses.

Breast cancer

What are the facts about breast cancer in women?

About 1 in 10 to 15 women (1 in 10 in Australia) develops breast cancer. Breast cancer is uncommon under the age of 30 but it then steadily increases to a maximum at the age of about 60 years, being most common over 50 years.

Most cases start in the milk ducts and at first remain localised to the breast, where it is referred to as 'cancer in situ'. If the tumour grows to about 25 mm, cells can break off and spread (metastasise) via the bloodstream and the lymphatic system to parts of the body such as the liver, lung and bones.

Most breast cancers are found when they are 'invasive'.

Note: Very rarely breast cancer can develop in men.

What are the symptoms?

The majority of people with breast cancer present with a breast lump, most commonly in the upper, outer part towards the armpit. Other symptoms are:

- a lump that is usually painless (16% are painful)
- a hard and irregular lump
- change in breast shape
- puckering or dimpling of overlying skin
- nipple changes: inverted (turned in) or discharge.

It is unusual for the lump to be a noticeable bulge. Diagnosis is confirmed by a biopsy and imaging (ultrasound and mammography).

What are the risk factors?

- Increasing age (over 40 years)
- Heredity—a strong family history
- Caucasian race
- Previous history of breast cancer
- Hormone replacement therapy, especially longer than 5 years
- Using the oral contraceptive pill
- Increased alcohol intake
- Obesity including heavy postmenopausal weight gain
- Early age at first period
- Later age at menopause (55 years or older)
- Childlessness or having children after 30
- Ionising radiation exposure

What are the hereditary factors?

About 1 in 20 breast cancers are caused by specific genes (the BRCA 1 and 2 genes) that can be inherited. Those with a strong family history can be tested for the genes in a familial cancer clinic.

What is the treatment?

The treatment depends on several factors including the size, type and nature of the cancer and the age, health and personal preference of the patient. The options include surgery, chemotherapy, radiotherapy and hormone treatment, usually a combination of two or more of these. The first-line treatment is usually an operation to remove the cancer, surrounding breast tissue and possibly adjacent lymph glands.

The main surgical options are:

- Breast-conserving surgery—'lumpectomy' or partial mastectomy—where a smaller operation for a smaller tumour removes the cancer and some of the surrounding breast tissue.
- Mastectomy—removal of the entire breast with lymph glands from the armpit. This is the surgery of choice for a large tumour.

Since the cancer cells first spread to the nearby lymph glands in the armpit, it is usual to remove these or at least have radiotherapy to this area. It is also standard to follow surgery for proven cancer with chemotherapy, radiotherapy or anti-hormone therapy (e.g. tamoxifen) depending on the pathology report and advice of the specialist.

Breast implants and reconstruction

Available options for cosmetic reasons include breast forms or prostheses to wear inside the bra, breast implants such as saline-filled devices and breast reconstruction using flaps of skin and muscle. These are often used following a mastectomy.

What is the outlook?

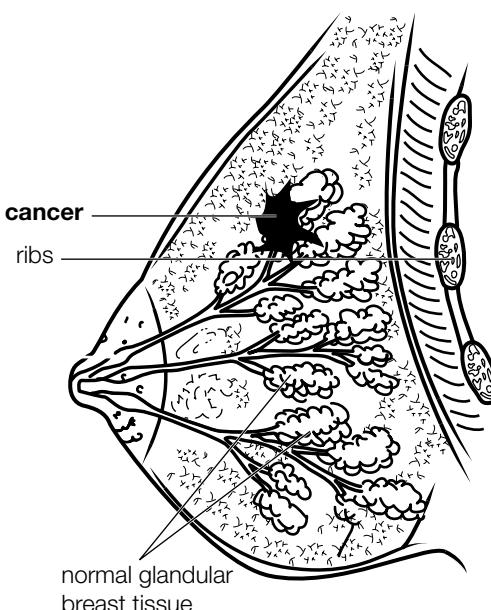
The results of treatment continue to improve. The 5-year survival rate is now just over 80%.

Breast cancer screening

It is recommended that women have screening mammography between 50 and 70 years, at least every 2 years.

Key points

- Breast cancer affects 1 in 10 Australian women.
- The chances of cure are good.
- Breast cancer support groups are helpful.
- Treatment options include surgery (total or partial mastectomy), radiotherapy, chemotherapy and hormone therapy.



Breast lumps

What are the types of breast lumps?

Breast lumps are very common in women and cause considerable anxiety. However, most are benign, that is, not cancerous. Some women have naturally lumpy breasts due to the nature of their breast tissue and this is usually no reason for concern. In many instances the lumps turn out to be areas of thickening of normal breast tissue. According to figures from breast clinics the three most common causes of breast lumps are:

- fibrocystic disease (also known as mammary dysplasia): 32%
- fibroadenoma: 23%
- cancer: 22%.

There are a whole variety of other lumps, which include simple cysts, fat necrosis, milk (lactation) cysts, papilloma of the duct and mammary duct ectasia. Tests to make a diagnosis and exclude cancer include a fine needle aspiration biopsy, ultrasound and mammography.

Checking your breasts

Most women find that their breasts become more lumpy and tender before their periods. Breasts can also change size and shape with obesity, increasing age and pregnancy. It is important to know your breasts well, how they look and feel and report any changes promptly to your doctor.

Fibrocystic disease of the breast

This condition is so common that many doctors do not consider it a disease at all, but a normal process. It is also known as mammary dysplasia, fibroadenosis and cystic hyperplasia. It is hormone related and occurs between the menarche (onset of menstruation) and the menopause.

Features

- Most common from 30 to 50 years
- Pain, tenderness and swelling
- Increased symptoms premenstrually
- Usually settles after the period
- Fluctuation in the size of the mass
- Nodular feel with possible obvious lump
- Affects one or both breasts
- Most cysts appear 5 years before the menopause

Management

- Mammography if diffuse lumpiness over 40 years of age
- Needle biopsy if obvious lump
- Needle aspiration of obvious cysts
- Medication, including analgesics for painful breast
- Surgery to remove undiagnosed lumps

Breast cysts

Cysts may occur in isolation or as part of mammary dysplasia (fibrocystic disease) and are common around the menopause time.

Features

- Fluid-filled sacs
- Common in women aged 40 to 50 years

- Rare under 30 years of age
- Tend to subside after the menopause
- May be tender or quite painful

Management

- Ultrasound is the investigation of choice
- Mammography can be considered
- Needle biopsy
- Needle aspiration of the cyst, which may then disappear

Fibroadenoma

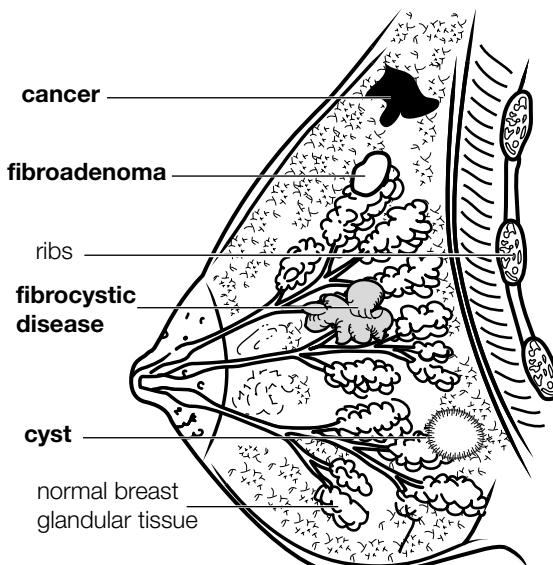
A fibroadenoma is a smooth, discrete breast lump consisting of fibrous and adenomatous (glandular) tissue. It is so firm and mobile that it appears to shift position and is commonly referred to as a 'breast mouse'. The cause is unknown.

Features

- Young women: usually in their 20s; common from 15 to 35 years of age
- Firm, smooth and mobile
- Usually asymptomatic: not painful
- Usually round
- Usually in upper outer breast area
- Doubles in size about every 12 months
- Rarely changes to cancer

Management

- Ultrasound and fine needle aspiration
- Mammography in older women
- Surgery is optional and may be left in late teens but as a rule if the tests are normal it can be safely left. If it enlarges or the woman wants to get rid of it, it is removed by a simple operation in day surgery.



Breast awareness and breast self-examination

Some doctors believe, based on medical evidence, that regular breast self-examination (BSE) doesn't reduce deaths from breast cancer. But many cancer experts still recommend it. Others argue it should be optional. All agree that women should be breast aware. This means learning how your breasts look and feel. Regular BSE does help you become familiar with the usual feel of your breasts.

Why examine your breasts?

Early detection of breast cancer increases the chances of successful treatment.

- You may detect any lumps in the breast at an early stage of their development.
- Although only 1 in 10 breast lumps is cancer, 1 in 15 women develops breast cancer at some time.
- Most breast cancers are found (as a lump) by the woman, not by the doctor.

Early detection of a lump—if it is a breast cancer—may mean a better chance of a cure.

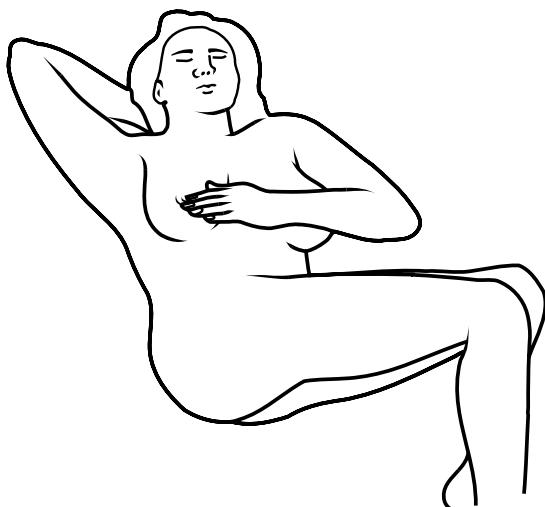
What is the technique?

There are several BSE methods. No matter which you use, it is important that you examine your breasts regularly and that you cover the breast area completely.

The method outlined here is simple, easy to learn and provides good coverage of the entire breast.

When should it be done?

Breast examination should be done once a month a few days after the end of your period.



Self-examination of breasts

Position

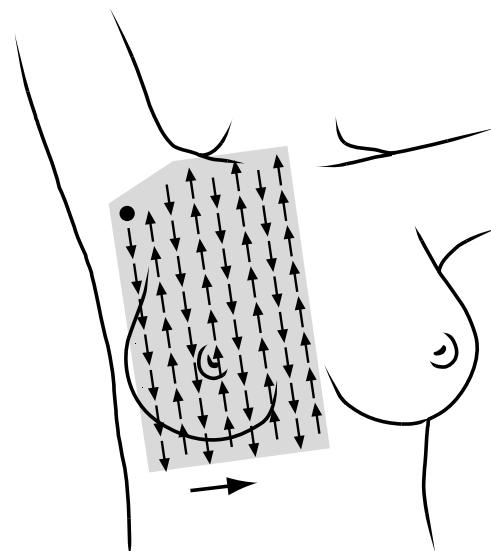
- The breast tissue must be spread as flat as possible.
- Lie on your back with one arm behind your head. The right breast is examined by the left hand and vice versa.
- Large-breasted women might need to modify this position. First lie on your side, then bring your shoulders flat onto

the bed. Once you have examined as far as the nipple, lie flat on your back to examine the remainder of the breast.

Boundaries of the 'map'

Your examination must cover the breast tissue area completely. The boundaries are:

- the collarbone
- the bra line
- the breastbone
- a line vertical from the middle of the underarm.



Examination

Vertical strips

Examine up and down the breast in vertical 'strips', beginning from the outer border. At the end of each strip, move the fingers about 2 cm towards the breastbone and examine another vertical strip.

The flat of your fingers

Use the flat part of your fingers, including the fingertip pads, to feel the breast. Move your hand in slow, circular movements.

Light and firm pressure

At each spot feel first with light pressure (to detect any lump just below the surface), then with a firm pressure (to detect any lump near the ribs).

When finished, reverse the position to examine the other breast.

What should you do if you find a lump or thickening?

If you find a lump, dimpling of the skin, nipple changes or a discharge, make sure you see your doctor as soon as possible. Please do not be afraid or put it off. Most changes are not cancer.

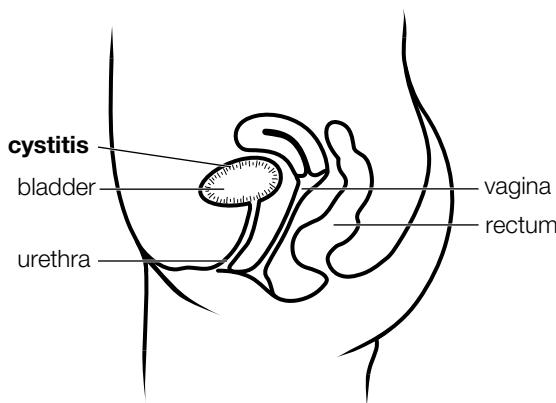
Cystitis in women

What is cystitis?

Cystitis is inflammation of the bladder, which is a very common problem; it is suffered by many women at some stage in their lives. The most vulnerable times are starting sexual activity (hence the term 'honeymoon cystitis'), during pregnancy and after menopause.

What causes cystitis?

It is almost always caused by bacteria (commonly *Escherichia coli*) travelling upwards along the rather short passage (the urethra) from the outside into the sterile bladder. This is often caused by intercourse, which pushes this short passage and bacteria upwards. These bacteria, which are present in the bowel, are normally found around the openings of the anus, vagina and urethra. The bladder soon learns to cope with these germs by a type of local immunity, but some women are prone to recurrent infections.



What are the symptoms?

- Burning or stinging when passing urine
- An urge to pass urine often
- Passing only small amounts of urine
- Discoloured and smelly urine
- Fever
- Pain in the back or low abdomen (may be present)
- Feeling generally unwell

What are the risks?

Cystitis is very uncomfortable and irritating, but is not a serious problem. An untreated infection can spread up to the kidneys, and this is serious.

What is the treatment?

Self-help

- Keep yourself rested and warm.
- Drink a lot of fluid: try 2 to 3 cups of water at first, and then 1 cup every 30 minutes.
- Try to empty your bladder completely each time.
- Gently wash or wipe your bottom from the front to the back with soft, moist tissues after going to the toilet.
- Take analgesics such as paracetamol for pain.

You should visit your doctor if the attack lasts more than 24 hours and bring a fresh specimen of urine, which you should collect after washing your vulva with clean cotton wool and water. The specimen of urine will be sent for examination under the microscope and cultured to identify the responsible bacteria and also the antibiotic sensitivity.

Medical help

You will be prescribed a course of antibiotics, which should all be taken. Your doctor may advise making the urine alkaline by using Ural or Citravescient or a teaspoon of baking soda (sodium bicarbonate) in water. A follow-up urine test will be necessary. If the antibiotics do not work or if you have more attacks, some special tests (including X-rays) may be necessary to check your urinary tract.

How can you prevent further attacks?

- Get into the habit of drinking plenty of fluids, especially on hot days.
- Pass urine often and when you feel like it—do not let it build up.
- Make sure you empty your bladder each time.
- Wash your bottom gently after each bowel motion, using mild soap and soft tissues.
- Empty your bladder immediately after intercourse.
- If your vagina is dry, use lubrication for intercourse (K-Y gel for young women and oestrogen cream after the menopause).
- Wear cotton underwear; avoid tight jeans and nylon pantyhose.
- Avoid the use of bubble baths and perfumed soaps, talcum powder and vaginal deodorants around the genital area.
- Cranberries as either juice or capsules have been shown to help prevent recurrences of urinary infection in those prone to getting it.

Dysmenorrhoea (painful periods)

What is dysmenorrhoea?

It is the medical term for painful periods. These can occur as part of an otherwise normal menstruation cycle—this is known as **primary dysmenorrhoea**.

On the other hand, painful periods can be caused by a problem that has developed in the uterus (womb), such as fibroid tumours or an infection—this is called **secondary dysmenorrhoea**.

What causes primary dysmenorrhoea?

It is caused by high levels of prostaglandins, which are natural substances produced by the lining of the uterus. One of the actions of prostaglandins is to cause the muscles of the uterus to contract tightly, thus producing cramping sensations. The problem is associated with the onset of ovulation, which is when the ovary starts releasing eggs.

What are the symptoms?

Period pains vary a lot in strength and position. Some women have a dull, dragging pain in the abdomen or lower back, or in both areas; others have more severe cramping abdominal pain. In some the pain may be felt in front of the thighs.

The pain is worse at the beginning of the period and may even commence up to 12 hours before the menses appear. It usually lasts for 24 hours, but may persist for 2 or 3 days.

Some women may get nausea and vomiting, and in severe cases fainting may occur.

What are the risks?

Dysmenorrhoea is very common, but most cases are mild and do not require medical attention. There is no risk at all unless it is a symptom of an underlying problem such as pelvic infection.

What is the treatment?

Studies indicate that taking 100 mg of vitamin B1 (thiamine) daily is worth trying. For most women painkillers such as paracetamol relieve the pain. If simple analgesics are ineffective it is recommended to take an anti-inflammatory agent such as naproxen or ibuprofen—speak to your doctor about this. If the pain is severe, your doctor may prescribe a stronger analgesic that neutralises the effect of prostaglandins. Taking the contraceptive pill usually stops

dysmenorrhoea. It often disappears after you have a baby or as you get older.

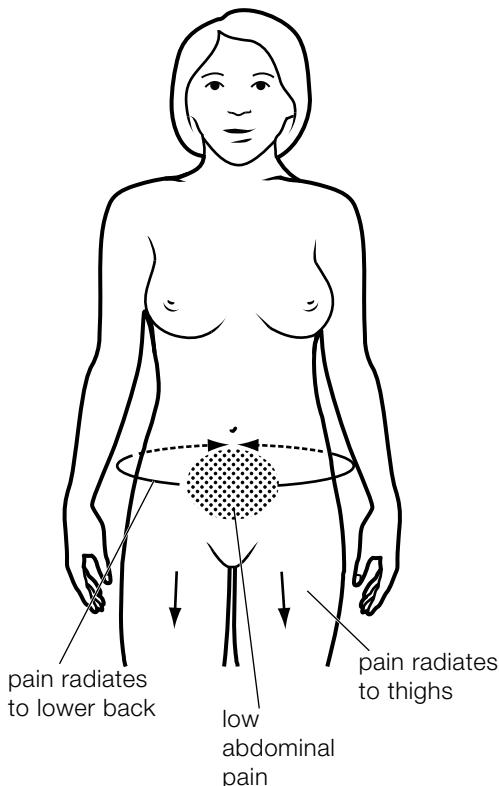
Keeping fit by leading a healthy lifestyle (including avoiding smoking and excessive alcohol and undertaking regular exercise) seems to help, as does practising relaxation techniques such as yoga.

If you get severe pain, rest in bed.

Simple measures such as placing a hot-water bottle over the painful area and curling your knees up to your chest as you lie on your side may provide relief.

When should you consult your doctor?

Consult your general practitioner if the pain worsens or if you develop period pain following 3 or 4 years of relatively pain-free periods.



Typical sites of period pain

Endometriosis

What is endometriosis?

The tissue lining your uterus (womb) is called the endometrium. Each menstrual cycle part of it grows and becomes engorged with blood and then is shed as a period. Endometriosis is a condition in which fragments of the endometrium grow in other places, such as the wall of the uterus, the ovaries, the ligaments inside the pelvis, the fallopian tubes and on other pelvic organs.

Each cycle, the blood from these fragments cannot escape because it is embedded in tissue in the pelvis. Small blood blisters develop and irritate the tissues.

There are many theories about the cause of endometriosis, but we do not fully understand how it comes about.

What are the symptoms?

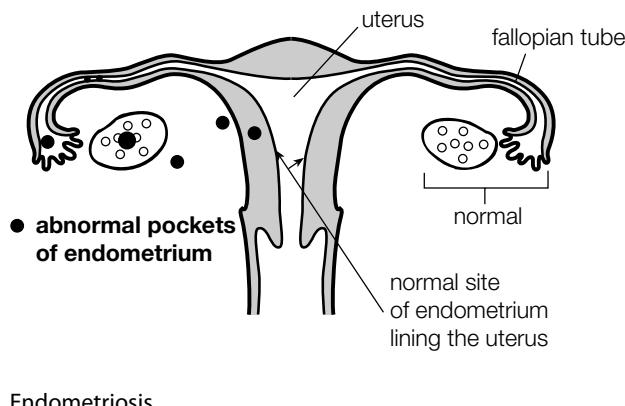
- Painful or heavy periods
- A dragging pain in the back, pelvis or abdomen during periods
- Ovulation pain
- Pain during intercourse
- Nausea and lethargy

You may have only one or two of these symptoms, and they can vary in severity from one person to another.

Many women with endometriosis have no symptoms at all, or have symptoms so mild that they pass unnoticed.

How common is endometriosis?

Endometriosis is a common problem, especially in its mild form. About 1 woman in 10 will have it to some degree, but only 1 in 100 will be affected by it. About 20% of women investigated for infertility will be diagnosed as having endometriosis.



Who gets endometriosis?

It can occur between puberty and menopause in any woman and appears most often between the ages of 25 and 35. It is more common in women who have not had children. It is not known why endometriosis occurs in some women and not in others. It is more common in some families.

How is it diagnosed?

It is indicated by the symptoms, but the only accurate method of diagnosis is by directly seeing the condition with a small tube called a laparoscope passed through a small cut into the abdomen. The spots of endometriosis are seen as small red or black lumps.

What should be done?

If you are suffering from painful periods and other symptoms that suggest endometriosis you will be referred to a gynaecologist, who will probably perform a laparoscopy before making a firm diagnosis.

What are the risks?

Endometriosis is a common cause of infertility. It can cause painful cysts inside the pelvis, and can affect the ovaries or the uterus. An operation may be necessary to remove the cysts, repair the ovaries or remove the uterus, but these measures are not usually necessary.

What is the treatment?

Many women do not require treatment apart from analgesics for pain. If necessary, however, endometriosis can be treated with drugs or surgery or both. Pregnancy will not cure it (as often believed) but may improve symptoms.

Surgical treatment

The ovaries and uterus are usually left intact but the endometrial tissue is destroyed by heat or laser and scar tissue is removed. The aim is to reduce symptoms and improve fertility. Sometimes a hysterectomy is necessary.

Medical treatment

Hormone treatment with one of the contraceptive pills, progestogens or danazol, aims to suppress the menstrual cycle, causing the endometrial cells to shrink and, hopefully, disappear. Hormones are usually taken for 6 to 12 months and can have side effects. Anti-inflammatory medication may be helpful.

Fibroids

What are fibroids?

Fibroids (also called leiomyomas or myoma) are benign tumours of smooth muscle of the uterus (womb). They can vary in size from a pea to a grapefruit and also vary in the rate of growth. Fibroids can develop anywhere in the uterus from deep within the muscular wall of the uterus to on the outside of the wall or inside the wall.

What is the cause of fibroids?

The reason why they develop inside the uterus is unknown. However, it is known that the sex hormones, oestrogen (in particular) and progesterone, are related to fibroids since they stop growing and tend to shrink with the onset of the menopause. They are rare in girls before puberty. They increase in size during pregnancy.

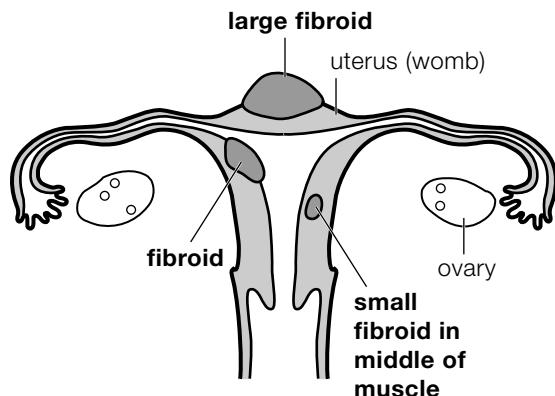
What are the main features of fibroids?

- Most common in women between 35 and 45 years
- Present in 40% of women over 40 years
- More common in Afro-Caribbean women
- Only 1 in 800 develop cancer
- Most cause no symptoms

What are the symptoms?

If the following symptoms do occur, it is due to large fibroids:

- heavy periods (menorrhagia)
- lengthy periods



- spotting between periods
- painful periods (dysmenorrhoea)
- painful intercourse
- pelvic discomfort (from pressure)—heaviness in back, bowel or bladder
- bladder problems—frequency or incomplete emptying of urine
- hard lump or swelling in lower abdomen.

What tests are often used?

- Pelvic ultrasound
- Hysteroscopy—to look inside the uterus
- Full blood examination to check for anaemia
- Biopsy of the uterus (if cancer is suspected)

What are the complications?

Fibroids usually cause no problems, but some complications can include:

- infertility
- anaemia from menorrhagia
- acute pain from twisting or degeneration
- miscarriage
- labour problems (premature labour, obstructed delivery).

What is the treatment?

If fibroids are causing no or few symptoms a 'wait-and-see' approach can be taken with regular monitoring (every 6 to 12 months). If women are over 45 the fibroids tend to get smaller or even disappear.

Special hormones can be given to shrink the fibroids (especially if over 42 years of age).

Surgical options include:

- myomectomy: this removes, or 'shells out', fibroids only (good if more children wanted)
- hysteroscopic resection
- uterine artery embolisation to block blood supply to fibroids
- hysterectomy: this is the traditional treatment for serious symptoms but is a major operation and reserved as a last resort if medication does not control the bleeding.

Hair loss in women

What is hair loss?

Hair loss or alopecia is a problem of great concern to all those who experience it. In many women a gradual but slight widespread thinning of the hair starts in adult life. It is basically a natural process and should not be regarded as abnormal. About 50% of women have significant hair loss by the age of 60. This is a male pattern baldness called androgenetic alopecia because it is under the influence of male hormones (androgens).

Facts about normal hair growth and loss

- Hair is continually produced and shed at the same time.
- About 50 to 100 hairs are shed daily without a reduction in hair thickness.
- Every hair on the scalp is shed and replaced every 3 to 5 years.
- At least 25% of hair must be shed before there is a noticeable loss of thickness.
- Significant hair loss tends to block the shower drain or be visible all over the pillow.

What are the causes of abnormal hair loss?

In general terms the basic causes are genetic (hereditary) factors, hormonal factors, stress, illness and drugs. Specific causes are:

- androgenetic alopecia (common baldness)
- alopecia areata
- chronic traction alopecia—due to an overtight hair style
- diffuse alopecia, due to:
 - telogen effluvium, or
 - drugs.

Androgenetic alopecia in women

Women also produce androgens but the hair loss pattern is slower and different to that of men. Diffuse thinning occurs, usually on the top of the head (the crown). The front hairline usually remains but in some women this can recede. Although hair loss can appear in men and women as early as their twenties, it may not appear before the age of 50 in women. Some women notice a short period of considerable hair loss but this may settle down to a long period of no loss. Androgenetic alopecia may be unmasked after an episode of diffuse loss such as occurs after childbirth or a severe illness. Total loss of hair rarely occurs in women.

Treatment is somewhat controversial and needs to be discussed with your doctor.

Alopecia areata

This is a disorder of the hair follicle that causes complete hair loss in patches leaving a smooth, clean, normal scalp or other area normally covered in hair. A smaller localised patch will usually recover spontaneously within 12 months, though some may not. Alopecia areata can cover an extensive area

and rarely it may cover the whole scalp (*alopecia totalis*), even the eyelids or eyebrows, when recovery is unlikely.

Diffuse alopecia

Telogen effluvium

This complex term refers to diffuse shedding of hair. It can be triggered by a variety of stressful conditions after which it takes about 2 to 4 months for the hair loss to occur. In this disorder up to 50% loss is common so perceptible thinning will be noticed. Patients usually complain of large clumps of hairs with white bulbs coming out with gentle tugging on combing or shampooing—this can exceed 150 hairs a day compared with the normal average of 50 to 100 hairs. The classic precipitating event is childbirth, when the hair thins about 3 months later. Others include any severe stress, high fever, weight loss especially crash dieting, trauma from surgery or an accident, malnutrition, ceasing the pill and certain illnesses.

People can be reassured that spontaneous recovery is usually expected in about 6 months. If stress factors are corrected and recovery is poor, topical minoxidil for a minimum of 4 months can be used.

Chronic telogen effluvium

This condition occurs usually in menopausal and post-menopausal women. There may be an episode of dramatic hair shedding that recovers but recurs weeks to months later and lasts up to several days. Fortunately it does not result in obvious balding—it is self-limiting and does not need treatment.

Drug-induced alopecia

Drugs are a very important cause of alopecia. Those that cause telogen effluvium include cytotoxics (cancer chemotherapy), anticoagulants (warfarin, heparin), antithyroid drugs, anti-epileptics and various hormones.

General comments on treatment

Medications

There are several drugs available that can slow down or prevent further hair loss. With these treatments most women will notice a reduction in hair loss and some will notice hair regrowth but normal regrowth is exceptional. The medications are expensive and need to be used for the rest of one's life if a good response occurs. You can discuss these medications with your doctor.

Physical treatments

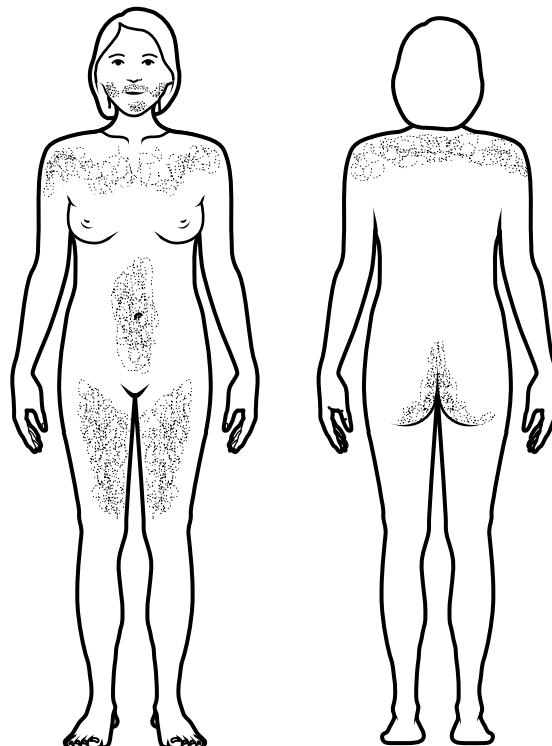
Other treatments include the use of wigs, hair transplantation and camouflage. Wigs can be worn on the whole head or on a bald spot, or fibres can be interwoven with the remaining hairs. You can consult hairdressing experts about camouflage.

What is hirsutism?

Hirsutism is the presence of excessive body or facial hair. For women, the areas most affected are the 'beard' area (upper lip, chin, front of the ears), the chest, the abdomen and the front of the thighs. The condition varies from being mild and hardly noticeable to being obvious.

What is normal?

Many women feel they are very 'hairy', but if this occurs in the normal female hair-growth areas (such as the armpits, forearms, pubic area and around the nipples) there is no cause for concern. A tendency to be 'hairy' may run in families or be prevalent in some races, such as those from the Mediterranean region. Even if the hair growth seems to be in a male pattern, there is usually no serious underlying cause and the problem can be treated. About 10% of Australian women are affected.



Sites of unwanted hair in women

What causes hirsutism?

It is due to excessive hair growth caused by overactive male sex hormones (present in all women) at the hair root. The reason for this is unclear. Often hairiness runs in families or is more common in certain races. It is rare in Asians. Certain medications, such as anti-epilepsy drugs and some oral contraceptive pills, can cause it. It is usually associated with polycystic ovarian syndrome and uncommonly it can be caused by cysts or tumours of the ovaries or adrenal glands.

What can be done?

Your doctor will need to take a full medical history and examine you to assess your hair growth. A blood test may be necessary.

What is the treatment?

- Your doctor may be able to reassure you that your hair growth is normal, and therefore no therapy is needed.
- Cosmetic measures (such as bleaching, waxing or shaving) or treatment with depilatory creams or electrolysis can help. Bleaching is a simple and good option. Your doctor will advise what will suit you. There is no evidence that shaving increases the rate of hair growth, but plucking the hair does stimulate growth. Do not pluck hairs around the lips and chin. Laser epilation may also help but seems to be most suited for dark hair on a light skin and lasts about 6 months.
- Medical treatment with drugs such as spironolactone can be used if your hair growth is excessive and causes you understandable social embarrassment. It will probably take at least 3 months for you to notice any difference in your hairiness, and for most women the hair grows back once they stop taking the medications. Eflornithine (Vaniqa) used to slow regrowth of unwanted facial hair following laser treatment.

Incontinence of urine

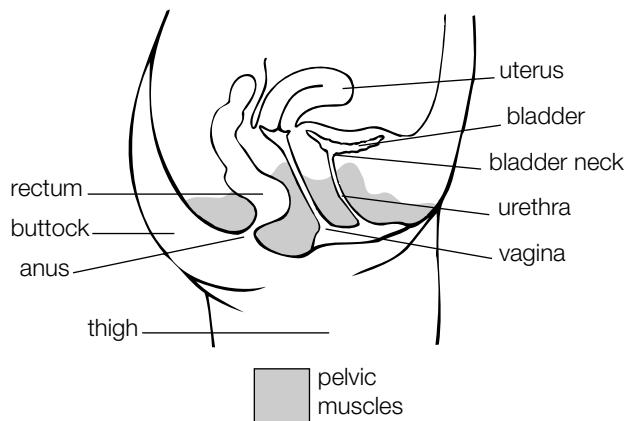
What is urinary incontinence?

Urinary incontinence is loss of bladder control, resulting in unintended leakage of urine. It may sometimes occur when people cough, sneeze, laugh or lift a heavy object. This 'stress incontinence' is the most common type, especially in women who have had children or after the menopause. It is caused by weakness in the muscles of the pelvic floor.

Incontinence may also happen when the bladder muscles become too active, causing a strong urge to pass urine even though there is little urine in the bladder. This is urge incontinence. Treatment depends on the type of incontinence and what best suits a person's circumstances. It may include pelvic floor exercises, medicines, special devices or procedures recommended by your doctor.

Pelvic muscle exercises

The muscles around the pelvis (pelvic muscles) are very important in supporting the bladder, urethra, vagina and rectum (see diagram). Following childbirth or with advancing age, these muscles may weaken. They may be strengthened by regularly practising pelvic muscle exercises. If these exercises are practised throughout life, they will reduce the chances of becoming incontinent. An outline of some of these exercises is given here. A physiotherapist may be able to assist in assessing and teaching pelvic muscle exercises.



Simplified cross-section of the female pelvis

Stage 1

To identify the correct muscles to exercise, do the following exercises during the first week:

- a. To identify the muscles around your back passage or rectum, sit or stand comfortably and imagine that you are trying to control diarrhoea by consciously tightening the ring of muscles around the back passage. Hold this 'squeeze' for 4 seconds each time.
- b. Go to the toilet and commence passing urine. Now try to stop the flow of urine in midstream. Once this is done, recommence voiding until the bladder has emptied. The muscles used to slow or stop the flow of urine are the front pelvic muscles, which help support the bladder.

- c. Some women find they can identify the correct pelvic muscles by inserting a finger into their vagina, then squeezing the finger by contracting the pelvic muscles. If the finger cannot be felt to be squeezed, probably the wrong muscles are being exercised or the muscles are still very weak. Do not give up, but proceed with the Stage 2 exercises.

Please note

- Do not bear down as if trying to pass a bowel motion (or as a woman would do during childbirth). This strengthens the wrong muscles and may make the incontinence worse.
- It may take a week or more to begin to identify the muscles that need to be exercised to regain the strength and tone of the pelvic muscles.

Stage 2

Now that the correct muscles have been identified, these are the pelvic exercises to do every day. They should not be done while passing urine.

- a. While sitting or standing with thighs slightly apart, contract the muscles around the back passage (rectum) then the front muscles around the vagina. Hold this contraction while counting to 5 slowly. Now relax these muscles. Repeat this 4 times. Try to be aware of the squeezing and lifting sensation in the pelvis that frequently occurs when these exercises are done correctly.
- b. While sitting or standing, tighten the muscles around the front and back passage together. Hold this contraction for just 1 second and relax. Repeat this exercise 5 times in quick succession.

Please note

- These 'slow' and 'quick' exercises are important to strengthen the pelvic muscles properly.
- In Stage 2, it is not appropriate to do the stage 1 exercise of stopping the flow of urine each time urine is passed at the toilet. This is only a preliminary exercise.
- These exercises ideally can be done every hour, but certainly not less than 4 times every day.
- With practice, the exercises should be quite easy to master, and they can be carried out at any time—while waiting for a bus, standing at the sink or watching television. There is no need to interrupt the daily routine.
- Once every week or two, it is important to return to Stage 1 for a quick check that the correct muscles are being used.

Other measures

- Maintain ideal weight (being overweight hinders the exercises) and drink plenty of fluid.
- If exercises don't work, a trial of a drug may be worthwhile.
- Go to the toilet only when you have the urge to go and then take your time to make sure that you have completely emptied your bladder.
- Surgery may help stress incontinence.

Menopause

What is the menopause?

The menopause is the end of menstruation, which in most women occurs between the ages of 45 and 55, with an average age in Australia of 51 years. It comes from the Greek word *men* (month) and *pausis* (halt). However, the term is used in a broader sense to describe the months or years before and after the last period, during which the periods become irregular and the body adjusts to reduced levels of female hormones. This may last 2 to 5 years or sometimes longer.

What causes the menopause?

The female hormones, oestrogen and progestogen, are no longer produced by the ovary because of a decline and finally a complete absence of maturing eggs (ova).

What are the symptoms?

In some women symptoms (other than the cessation of periods) may be mild or absent. Common symptoms include the following.

Period changes

Periods may stop abruptly or after a prolonged irregular pattern such as lighter periods occurring further apart or heavier frequent periods. Fertility is greatly reduced, far more unpredictable and finally absent.

Hot flushes

These symptoms are a sensation of heat, usually in the face and neck, but can be experienced from head to toe and last from seconds to minutes. They may be accompanied by sweating, palpitations, headache, faintness and disturbed sleep, and can be aggravated by alcohol, hot foods and drinks, and stress.

In themselves they are harmless, but they can cause embarrassment, sleep disruption, tiredness and anxiety. They may continue from a few months to many years after the periods cease.

Vagina and bladder symptoms

The normally moist tissue of the vagina and base of the bladder can become dry and inelastic. This can result in uncomfortable intercourse and an increased chance of infection of the bladder or vagina.

Emotional problems

A woman may experience fluctuating levels of energy and concentration with tiredness, irritability, lack of confidence and loss of interest in sexual activity. Occasionally anxiety and depression can be a problem.

Is osteoporosis (thinning of bone) a problem?

It has been shown that reduced levels of oestrogen cause increased loss of calcium from bone tissue, which causes osteoporosis of varying degrees. Certain drugs and medical conditions and smoking can aggravate it. If you are slightly built or have a family history of osteoporosis, speak to your doctor about this potential problem.

What should be done?

While it is important to accept that the menopause is a natural fact of life and nothing to be embarrassed or worried about, you should discuss any unpleasant problems with an understanding friend or your doctor.

It is important to lead a healthy life: follow a correct diet, avoid obesity, get adequate relaxation and exercise, and reduce the use of cigarettes, caffeine and alcohol.

It is normal and healthy to continue sexual relations, but a vaginal lubricant such as K-Y gel may be necessary if your vagina is too dry. Contraception is advisable for 12 months after the last period.

What about hormone replacement therapy (HRT)?

If you have troublesome symptoms, hormones (both oestrogen and progestogen) can be given. Usually special skin patches or tablets are prescribed.

A vaginal cream or tablet containing oestrogen is available for a dry vagina.

However, there are concerns about long-term use of HRT, especially in women with previous breast cancer and those with a strong family history of it. HRT can still be used in the short term for 1 to 2 years to relieve the unpleasant symptoms of hot flushes. It should be reviewed with a view to continuing HRT safely for up to 5 years in total.

Are there alternatives to HRT?

There are natural preparations, such as those containing black cohosh extract (especially) and chaste tree extract (*vitex agnus castus*), which have been shown to help some women. But be cautious of over-the-counter remedies as many are ineffective. Ask your doctor about alternatives.

Remember

- Menopause is a normal change representing the end of reproductive life. Be informed and unafraid.
- Report to your doctor if you have a return of unusual bleeding.
- Continuing medical checks for breast examination, Pap tests and general health assessment are important.

Menorrhagia (heavy periods)

What is menorrhagia?

Menorrhagia means unusually heavy periods or bleeding between periods. Women with menorrhagia may experience 'flooding', may pass large clots with the menses or may have periods which are prolonged (lasting more than 7 days).

- Normal period blood loss is between 20 to 60 mL (4 to 12 teaspoonsfuls).
- The average blood loss in a menstrual cycle is 30 to 40 mL.
- A heavy period blood loss is more than 80 mL (half a teacup).

It is a common complaint affecting 5 to 10% of women.

What are the symptoms?

Apart from heavy blood loss during the period and bleeding or spotting between periods, there may be cramping pains in the lower abdomen. Heavy bleeding may be described as 'saturated pads', 'frequent changing', 'accidents' and 'clots'. There may be prolonged bleeding. Since there is a risk of iron deficiency, symptoms of anaemia such as fatigue and weakness may occur.

What is the cause of menorrhagia?

In most cases the exact cause is unknown and the uterus (womb) and ovaries appear normal—this is called 'dysfunctional uterine bleeding'. It is most common at the extremes of reproductive age—menarche and menopause. We do know that a chemical called prostaglandin is a factor since its level in the lining of the uterus (the endometrium) is high in women with heavy periods and tends to stop clotting of blood.

Known causes of menorrhagia include:

- fibroids, which are non-cancerous growths in the muscle of the uterus
- hormone contraceptives including Depo Provera
- endometriosis of the uterus
- the intrauterine device (IUD)—a contraceptive device placed in the uterus
- bleeding disorders and warfarin used to reduce blood clotting
- miscarriage and ectopic pregnancy
- infection, including sexually transmitted infection
- endometrial cancer in the lining of the uterus.

How is menorrhagia diagnosed?

Apart from a thorough clinical examination by your doctor including a pelvic examination and Pap test, some of the following tests may be ordered:

- blood tests to check for anaemia
- abdominal and vaginal ultrasound
- endometrial biopsy
- D & C (dilatation and curettage)
- hysteroscopy, where a 'telescope' is placed inside the uterus for inspection.

What is the treatment?

Surgical treatment

- D & C to gently scrape away the endometrium
- Total removal of the endometrium
- Surgery to remove tumours such as fibroids and polyps
- Hysterectomy (removal of the uterus), which is a last resort if all other options including more limited surgery have not worked

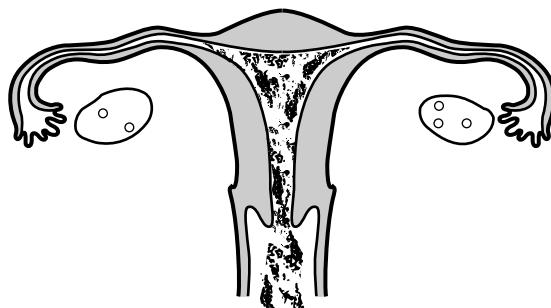
Treatment for dysfunctional bleeding

In this category there is no clear-cut cause so the aim of treatment is to reduce the amount of blood loss. This is done by giving hormone treatment (progesterone) or anti-prostaglandin medication such as non-steroidal anti-inflammatory drugs (NSAIDS), or by helping blood clotting and reducing bleeding (tranexamic acid). If the doctor and the patient agree that the heavy periods do not interfere too much with life, a decision can be made to live with the problem but monitor it, including checking for anaemia. Examples of treatments are:

- The oral contraceptive pill. This is an important treatment as it reduces bleeding by one-third.
- Progesterone tablets. These are excellent, especially for acute heavy bleeding.
- Progesterone-releasing IUD. This device (Mirena) releases hormone gradually and makes the lining of the uterus very thin. It also acts as a contraceptive.
- Tranexamic acid (Cyklokapron). This is the most effective therapy, reducing bleeding by almost half. The tablets are usually taken 4 times a day for 4 days.

General self-help suggestions

- Keep a menstrual diary.
- Rest as much as possible.
- Take iron supplements (best to have blood tests first).
- Eat a well-balanced diet.
- Avoid aspirin (may increase bleeding).



Menorrhagia is blood loss more than 80 mL

What causes breast pain?

Breast pain (known as mastalgia) has several possible causes. A general breast discomfort is common in the second half of a woman's menstrual cycle and is called cyclical mastalgia. The pain or discomfort is often related to the menstrual cycle, and may come on about the time ovulation takes place and be greatest just before a period. It is caused by normal hormonal changes and is not harmful.

Other causes are:

- pregnancy (breast tenderness tends to be more common during the first trimester)
- after childbirth (breasts may become swollen with milk and painful; and breastfeeding itself may cause breast pain)
- infection (e.g., inflammation of the breast, known as mastitis, or an abscess, both of which may occur after childbirth)
- breast lumps (e.g., in fibrocystic disease; these tend to be more tender just before a menstrual period)
- certain drugs
- weight gain
- poorly fitting bras.

Note: Early breast cancer is usually painless, but all lumps need careful investigation.

Is it common?

It is a very common problem, with about 2 out of 3 women complaining of breast pain at some stage of their lives. It is most common in the thirties and early forties.

What are the symptoms?

The pain can vary from very mild to severe. It is usually a heaviness or discomfort in the breasts, while some women experience a prickling or stabbing sensation. The breasts may feel lumpy or quite normal to touch. The breasts may be so tender that hugging and fondling cause distress.

What is the treatment?

The first thing to keep in mind is that breast pain is common, and in only 1 case in 200 will cancer be the cause. No treatment may be needed in mild cases and the problem may settle in 3–6 months.

Self-help

- Reduce weight if you are overweight: aim to keep at an ideal weight.
- Reduce or cut out caffeine.
- Follow a nutritious, low-fat diet high in complex carbohydrates.
- Wear good-quality comfortable bras.
- Take a mild analgesic for pain, such as paracetamol or ibuprofen, either by mouth or topical (rubbed onto the breast).

'Natural' medication

Vitamins may help (although studies have not shown any proven benefit):

- vitamin B1 (thiamine): 100 mg per day
- vitamin B6 (pyridoxine): 100 mg per day
- evening primrose oil capsules: 4 g per day.

Use one or a combination of these agents.

Drug treatment

Your doctor may change your oral contraception or hormone replacement therapy (if you are taking it) or prescribe other hormonal drugs. Be sure to talk with your doctor before taking any medication or supplement.

Report persistent pain or any persistent lumps to your doctor. See your doctor if you have a bloody or clear discharge from your nipple, if your breasts are swollen or hard, or if there are signs of breast infection such as redness in the breast or pus, or if you have a fever.

Pap test

What is a Pap test?

The Pap test (Papanicolaou test), also called the Pap smear or smear test, is a simple test that scrapes cells off the surface of your cervix for examination in a laboratory.

Why have it?

It can detect early warning signs of cancer of the cervix (cancer of the neck of the uterus). This is one of the most curable forms of cancer if detected early; hardly any women would die from it if all had regular Pap tests as recommended by the medical profession. Cervical cancer is related to exposure to the human papilloma virus (HPV or wart virus). The early changes in the cells cause no symptoms, and so women in early stages of cervical cancer feel quite healthy.

Who should have it?

Any woman from 18 years of age who has had sex, including gay sex, should have a Pap test, and it should be performed every 2 years up to the age of 69. Even women who have stopped having periods or stopped having sex or have had the HPV vaccine should have regular Pap tests.

When is the ideal time to have a Pap test?

The best time to have a Pap test is any time after your period has finished. It should not be done if you have been douching or using vaginal tablets in the previous 48 hours. It is best to wait until 24 hours after intercourse.

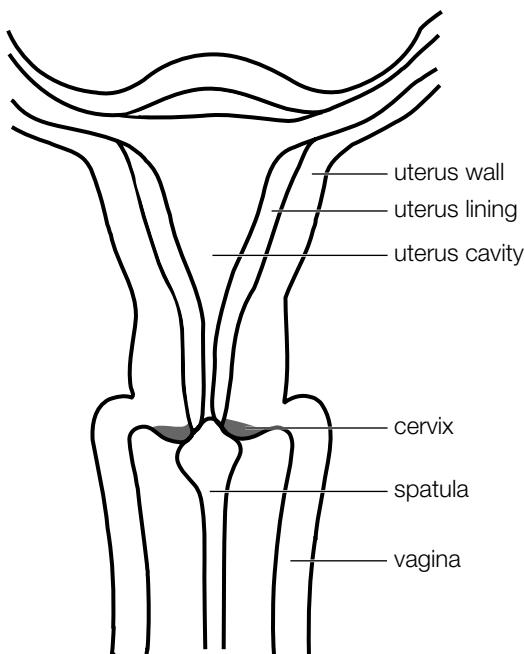
How is the Pap test done?

It is part of a normal pelvic or vaginal examination.

1. You lie on your back or your side on the couch.
2. An instrument called a speculum is slid gently into your vagina and then opened so that the doctor can see the cervix clearly, with the help of a light.
3. The smear is then taken with a thin spatula and a soft brush. It is really a very thin amount of mucus with cells that sit on the surface and the small opening of the cervix. The smear is then placed on a glass slide, which is sent away to be tested.

Does the Pap test hurt or take long?

It is a simple test that does not take long (only about 2 to 3 minutes) and is uncomfortable, especially if you are tense, but should not cause any pain. The more relaxed you are the better. Deep breathing will help you relax.



Will I feel embarrassed?

It is quite normal to feel a little embarrassed. Doctors, of course, are used to doing these tests and perform many each day, so they understand. Nobody has ever died of embarrassment, but many have died of cancer of the cervix by not having a Pap test.

What about the results?

The results take about 1 to 2 weeks. Ask your doctor when you should ring for the results. The results are almost always normal. Abnormal cells are seen in only about 3 in 1000 tests and do not always mean cancer. The microscopic findings are not infallible, unfortunately, but are improving all the time and are almost 100% accurate. If there is any doubt, you will be recalled for a repeat test. For most women who have abnormal cells, the treatment is simple and effective.

What are the newer laboratory methods?

These are the Thin Prep and Papnet methods of studying the cells from the Pap test which is done in the usual way. They appear to be better at picking up abnormal cells in doubtful cases but cost more. However, the standard smear remains highly effective for screening.

Key points

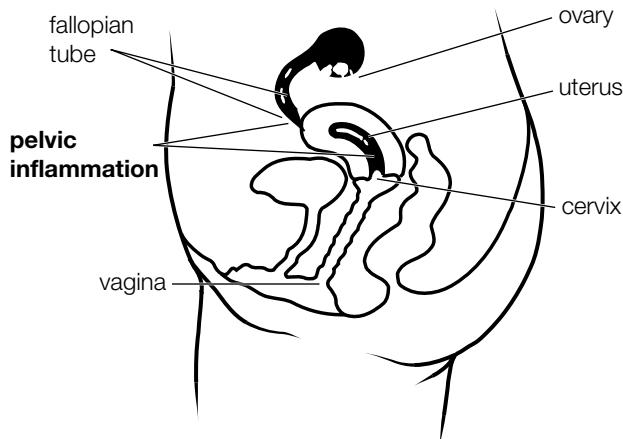
- A Pap test is simple, quick and painless.
- It should be done every 2 years.
- It should be done throughout life from the start of sexual activity up to 69 years.
- The test enables early detection of cell changes that could lead to cancer of the cervix.
- Cancer of the cervix is curable if detected early.
- The test is your safeguard.

Pelvic inflammatory disease

What is pelvic inflammatory disease (PID)?

Pelvic inflammatory disease describes any infection of the reproductive organs of a woman. It occurs when microbes (germs) travel up through the cervix and uterus (womb) and then spread inwards to the fallopian tubes, ovaries and surrounding tissues in the pelvis. The most common serious infection is that of the tubes—this is called salpingitis.

A pelvic infection can be either acute, which causes sudden severe symptoms, or chronic, which gradually produces milder symptoms.



What are the facts?

Here are some basic facts about the disease:

- Unprotected sex with someone who is infected causes up to 75% of cases.
- Minor operations (such as the insertion of an intrauterine device [IUD]) or procedures of pregnancy (such as a miscarriage, an abortion or even a delivery) can cause PID.
- Up to 10% of young women normally have the microbes, which include chlamydia and gonorrhoea, on their cervix. These women are at special risk of getting PID. Chlamydia is the most common cause of PID.
- The most common cause of infertility in Australia is PID—it affects about 5000 Australian women each year.
- PID is a preventable disease and it is best diagnosed by laparoscopy (where a tube is passed through the abdomen).

Who are the women most at risk?

The women most at risk are those who:

- are between 20 and 29 years
- have abnormal Pap tests when aged between 15 and 35 years
- have multiple sexual partners
- have steady partners who have sex with others
- do not use barrier methods of contraception (e.g. condoms)

- have operations needing the opening of the cervix (e.g. dilation and curettage, and placement of an IUD).

What are the symptoms?

Many patients may feel no symptoms (PID is often called the 'silent epidemic'), but others may have symptoms that vary from mild to very severe.

Acute PID

- Fever
- Severe abdominal pain

Chronic PID

- Ache in the lower back
- Mild lower abdominal pain

Both acute and chronic

- Painful intercourse
- Menstrual problems (e.g. painful, heavy or irregular periods)
- Unusual, perhaps smelly, vaginal discharge
- Painful or frequent urination

What are the risks?

PID can lead to scarring of the reproductive system. The main serious risks of this are subsequent sterility, ectopic pregnancies and further episodes of PID. Occasionally an acute infection may cause a pelvic abscess or cause peritonitis or even blood poisoning by spreading.

How can it be prevented?

- Safe sex is most important. Insist on condoms with all sexual partners.
- Avoid IUDs if you have a history of PID or have a number of sexual partners.
- It is advisable to have antibiotic treatment if a partner has or gets an STI even if you have no symptoms.
- If you get PID, your partner or partners should be treated.
- Those at risk for PID should have regular check-ups.

Note: It is your responsibility to inform your partner or partners that you have PID.

What is the treatment?

A course of antibiotics is given, usually by mouth. Avoid sexual intercourse or manipulation of your vagina (e.g. with hands or tampons) until the infection is cleared. This may take 2 to 4 weeks.

If you have an IUD, it should be removed.

Pill: the combination pill

What is the combination pill?

As the name suggests, the combination pill is a combination of two female sex hormones that prevents pregnancy by changing the hormone balance in your body to stop ovulation (the monthly release of the egg from the ovary). There are 28-day and 21-day packets, the only difference being the 7 inactive 'sugar' pills in the 28-day packet.

How effective is the pill?

If taken according to instructions, the pill is at least 99% effective.

When are you safe?

The pill will prevent pregnancy after you have taken the first seven active pills in a row, including taking a new pack starting from day 1 of your cycle (i.e. the first day of bleeding).

How is it commenced?

This varies according to the type of pill prescribed, so follow the instructions that come with the pill packet. It is usual to start the 28-day pack on the first day of bleeding of your next period and the 21-day pack on the fifth day of your cycle or on a particular day (e.g. Saturday) after your next period starts.

When and how is it taken?

The tablet should be swallowed whole with a small amount of water. It does not matter what time of the day you take it, but it is important to get into the habit of taking the pill at the same time (e.g. after breakfast or at bedtime).

What if a pill is missed or taken late?

The 7-day rule

- Take the forgotten pill as soon as possible, even if it means taking two pills in 1 day.
- Take the next pill at the usual time and finish the course.
- If you forget to take the missed pill for more than 12 hours after the usual time, there is an increased risk of pregnancy so use another form of contraception (such as condoms) for 7 days.
- If these 7 days run beyond the last hormone pill in the packet, miss out the inactive pills (or 7-day group) and proceed directly to the first hormone pill in the next pack.

How does it affect periods?

Periods tend to become shorter, regular and lighter. The blood loss may be the brownish colour of old blood. The pill also tends to help painful periods.

Is a break from the pill necessary?

There is no reason to take a break from the pill. It is best to continue on until pregnancy is contemplated.

What if a period is missed?

If you miss a period, you should continue taking the pill but check with your doctor to exclude pregnancy.

Is it safe during lactation?

The pill can interfere with the quantity and quality of breast milk, so it is better to use another type of contraception during breastfeeding. If a pill is used, the most appropriate is a progestogen-only pill.

What are the unwanted effects (side effects)?

The most common side effects are nausea (feeling sick), breast tenderness and breakthrough spotting (i.e. bleeding between your usual periods). These side effects tend to disappear after a couple of months on the pill. More serious (although uncommon) effects include migraine headaches, high blood pressure and a tendency to form clots in the veins. To check if it is safe for you to take the pill, refer to the instruction leaflet that comes with the pill, or consult your doctor.

What about alcohol and other drugs?

Alcohol in moderation does not appear to interfere with the pill. Medications that can reduce the effectiveness of the pill include antibiotics, vitamin C and drugs to treat epilepsy and tuberculosis. The pill may affect blood-thinning drugs and some drugs taken for diabetes. Check with your doctor.

If you are taking antibiotics, continue the pill, use another contraceptive method during the course and follow the 7-day rule when the course is finished.

What are the special rules to follow?

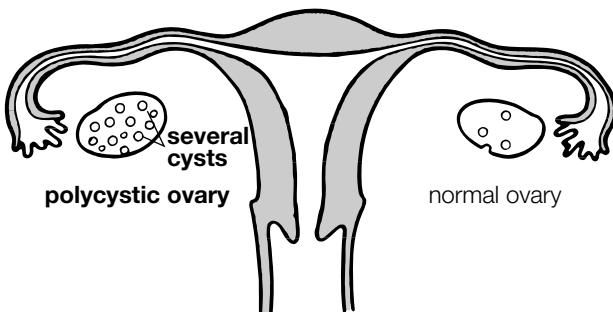
- Smoking creates a health risk with the pill, so avoid smoking while on the pill.
- Make sure you tell a doctor if you are taking the pill when other medicine is about to be prescribed.
- Natural products used in complementary medicine may affect the pill.
- Diarrhoea and vomiting may reduce the effectiveness of the pill—use additional contraception until you finish the course. (Follow the 7-day rule.)
- Report persistent or heavy bleeding between periods.
- Report any onset of blurred vision, severe headache or pain in the chest or limbs.
- Return for a check-up every 12 months while you are on the pill.
- Perform breast self-examination regularly and have a Pap test every 2 years.
- Remember that the pill is highly effective, but pregnancy can occur if the pill is taken at irregular times, if illnesses such as fever and gastric upsets develop, or if you are taking other drugs.

Polycystic ovary syndrome

What is polycystic ovary syndrome (PCOS)?

PCOS is the name given to a syndrome in which women have an enlarged ovary containing many small cysts, plus a number of specific symptoms.

The polycystic ovary is detected on an ultrasound scan but not all women with these enlarged ovaries have the syndrome. On the other hand, not all women with PCOS have polycystic ovaries.



What are the symptoms?

There are four main features of the syndrome:

- subfertility: achieving pregnancy is more difficult
- menstrual problems:
 - scanty or no periods
 - irregular, usually lighter, bleeding
- weight gain
- excess hair on face (may also be on arms and legs).

Other possible features are:

- acne
- increased miscarriage rate
- insulin resistance
- impaired glucose tolerance.

Who gets PCOS and how common is it?

PCOS can affect any woman between late adolescence and menopause. About 1 in 5 (20%) of premenopausal women have polycystic ovaries while 5 to 10% have the syndrome.

What is the cause of PCOS?

The exact cause is unknown. There is a hereditary factor with children of those affected having an increased risk. PCOS is believed to be due to an imbalance of hormones produced by the ovary. The master gland in the brain (the pituitary) senses this problem and releases increased amounts of hormones, which stimulate the ovary to produce more cysts and thus more 'eggs'. However, the eggs (ova) do not seem to mature to ovulation.

How is PCOS diagnosed?

Pelvic ultrasound and blood tests to measure hormone levels are the main investigations. Removal of tissue lining the uterus (endometrial biopsy) is also a useful investigation.

What do polycystic ovaries look like?

The ovaries are enlarged with a thick white surface. They contain many cysts—at least 12—which are usually quite small, measuring about 2 to 7 mm.

What are the problems with PCOS?

The central problem is persistent lack of ovulation, thus causing a fertility problem.

Biochemical problems include diabetes (type 2) and high cholesterol. Other concerns are an increased risk of hypertension, coronary heart disease and cancer of the uterus.

What can be done?

Lifestyle requires attention in the first place. It is helpful to join a support group to share issues about the syndrome.

Weight control

The most important first-line treatment is weight loss for those who are overweight or obese. This can be difficult and may take a year or so. The help of an accredited practising dietitian is advisable. The diet is based on low carbohydrate and energy control similar to that used for diabetes. Weight loss alone in obese women with PCOS can restore normal ovarian function.

Exercise

Have regular exercise to control weight and keep fit (e.g. 30 minutes of brisk walking each day).

Other management strategies

Hair removal

Unwanted hair can be removed by waxing or electrolysis.

Hormone therapy

For women not trying to conceive, the use of one of the oral contraception pills will help regulate cycles and improve troublesome symptoms, including acne.

For those desiring to get pregnant, a specialist may prescribe hormones to induce ovulation and thus conception.

Surgical therapy

A laparoscope is used to make several punctures in the ovary with a hot needle. This is called laparoscopic ovarian diathermy. This induces ovulation and increases the possibility of getting pregnant.

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Premenstrual syndrome

What is premenstrual syndrome?

Premenstrual syndrome, commonly called premenstrual tension or PMT, is a set of symptoms, both physical and psychological, that some women experience before their periods. These symptoms usually go away when the period starts. The symptoms are caused by hormonal changes in the body before the period and vary from woman to woman. The build-up of fluid in the body at this time is an example of this.

Is it common?

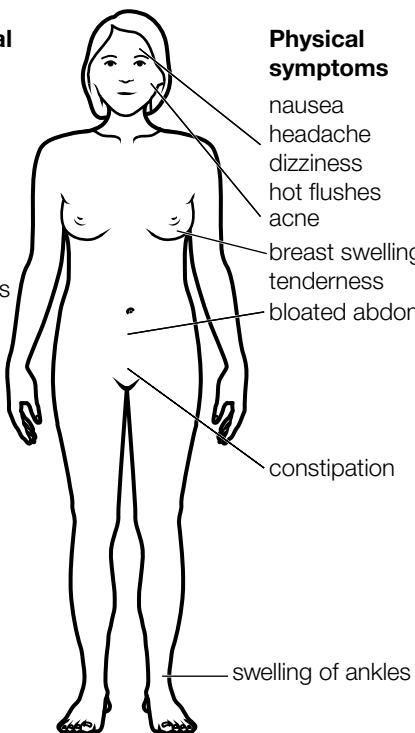
Yes; possibly up to 90% of women experience some symptoms, which can vary from minor to severe. PMT tends to increase with age.

Psychological symptoms

- insomnia
- moodiness
- irritability
- anxiety
- tension
- depression
- confusion
- food cravings

Physical symptoms

- nausea
- headache
- dizziness
- hot flushes
- acne
- breast swelling and tenderness
- bloated abdomen
- constipation
- swelling of ankles



Symptoms of premenstrual tension

What are the symptoms?

The important symptoms are summarised in the diagram, but the most common symptoms are moodiness, irritability, tension, headache, constipation, sore breasts and bloated feelings.

What can be done about these symptoms?

Insight

Understanding your symptoms and why they occur can be a big help. It is helpful to be open about your problem and tell your family and close friends about these symptoms. Consider joining a support group.

Keep a diary

Keep a list of your main symptoms and note when they occur over a 2 to 3 month period. Use this information to help plan around your symptoms; for example avoid too many social events and postpone demanding business appointments.

Lifestyle changes

- Diet. Eat regularly and sensibly: eat small rather than large meals; avoid excess salt, caffeine and fluids. If necessary, reduce your weight to an ideal level.
- Exercise. Regular exercise often helps (e.g. swimming, aerobics, tennis).
- Relaxation. Plan to do things that you find relaxing and enjoyable during this time. Stress aggravates PMT, so reduce it wherever possible.
- Proper dress. Sensible dressing to cope with breast tenderness and a bloated abdomen is useful (e.g. a firm-fitting bra and loose-fitting clothes around the abdomen).
- Medicine. Some medicines may help those with more severe symptoms, so discuss these options with your doctor. Examples of proven treatment used for premenstrual tension include vitamin B6 (pyridoxine), danazol, and certain antidepressant agents. It is worth taking pyridoxine 100 mg daily for 6 months. If PMT persists discuss it with your doctor. Your doctor may prescribe antidepressant medication for more severe PMT.

Tubal ligation

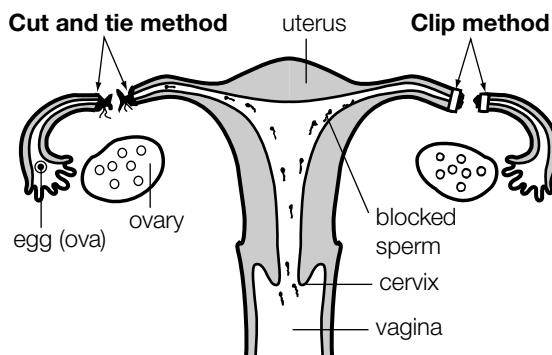
What is tubal ligation?

Tubal ligation is a sterilisation operation in which the fallopian tubes are cut off or blocked. This stops the sperm reaching the egg in the tube, which is the normal site of fertilisation.

How is the operation done?

Tubal ligation is usually done under a general anaesthetic. It is necessary to get inside the abdomen. This is done by one of several methods, most commonly by a small cut just above the pubic hair line or through a special tube called a laparoscope. In the laparoscopic method the tube is passed through a small cut about 1 cm long made just below the navel, and the fallopian tubes are located through a powerful light system. Rings or clips can be attached to the two tubes or the tubes can be burnt (cauterised) and the ends tied off. The ring or clip method makes reversal easier if necessary later on.

In other methods the surgeon picks up each tube through the wound, removes a section of tube and ties the ends.



Tubal ligation

How long is the hospital stay?

This is usually 1 to 2 days, depending on the operation method and the policy of the hospital.

How effective is tubal ligation?

It is very effective, but failures do occur in about 1 in 200 operations. Some methods have a better success rate than others.

Does tubal ligation affect sexual function?

A normal sex life can resume once the effect of the operation is over. Many women find that their sex life is better without the worry about getting pregnant.

Does tubal ligation affect menstruation?

Menstruation continues as usual, but some women report that their periods are heavier, especially if large pieces of tube are removed. However, the modern laparoscopic methods do not appear to cause heavier menstruation.

Does tubal ligation cause weight gain?

No, it does not cause weight gain because it has no effect on hormones or appetite.

Can sterilisation be reversed?

The cut tubes can be rejoined by microsurgery, but there is no guarantee of regaining fertility. The successful pregnancy rates vary between 30 and 80%, depending on the technique used. The simple clip method gives a better chance of reversal.

Tubal ligation, however, should be regarded as permanent and irreversible and not be entered into lightly.

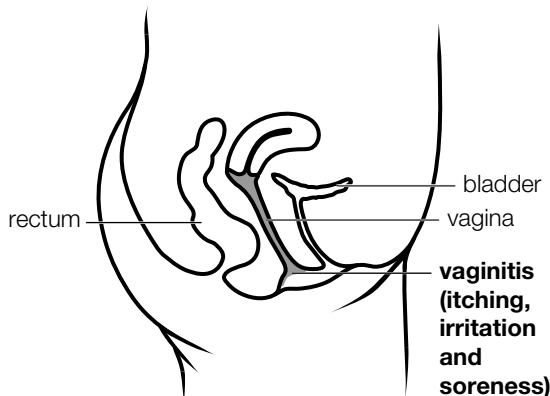
Vaginal thrush

Vaginal thrush, sometimes called ‘monilia’ or a ‘yeast’ infection, is a common condition caused by an overgrowth of the micro-organism *Candida albicans*.

What are the symptoms?

Symptoms around the genital area

- Itching
- Irritation
- Soreness
- Swelling of the vaginal opening



The extent of vaginal thrush

Other symptoms

- Cheesy-white discharge
- Discomfort during intercourse
- Pain when urinating
- Unpleasant odour (possibly)

What is the cause?

Candida is one of a large number of organisms present in the vagina all the time. These organisms do no harm until something upsets their normal balance (and sometimes that trigger factor is not obvious).

Factors likely to cause vaginal thrush

- Diabetes
- Treatment with antibiotics or cortisone
- Pregnancy

Factors that might cause vaginal thrush

- Intercourse
- Oral contraceptives
- An IUD (intrauterine device)
- Tight-fitting jeans
- Nylon underwear
- Leaving on a wet bathing suit after swimming
- Humid weather
- Travel (due to prolonged sitting)
- Obesity

What is the treatment?

- See your doctor about a vaginal cream or pessary to insert high up in the vagina.
- Bathe the genital area gently 2 or 3 times a day to relieve the discomfort and itching. Use 1 tablespoon of bicarbonate of soda in 1 litre of warm water.
- Dry the genital area thoroughly after showering or bathing.
- Wear loose-fitting cotton underwear.
- Avoid having intercourse while you have thrush.
- Sometimes tablets to take by mouth are prescribed.

Should your partner be treated?

This is a controversial issue but is not recommended as there is no proven benefit from treating your partner.

How is it prevented?

- Wash and thoroughly dry the genital area at least once a day.
- Do not wear pantyhose, tight jeans or tight underwear or use tampons. (*Candida* thrives in warm, moist, dark areas.)
- Do not use vaginal douches, powders or deodorants.
- Follow a healthy lifestyle.

What should you do if the infection keeps returning?

- Are you taking antibiotics? Ask your doctor’s advice about the thrush.
- If you are using oral contraceptives, you might have to change to another form of contraception.
- See your doctor about checking your urine for sugar (diabetes) or another infection.

Erectile dysfunction (impotence)

What is erectile dysfunction?

Erectile dysfunction refers to the persistent inability of a man to get or maintain an erection of the penis sufficiently to have sexual intercourse. Most adult men have probably experienced a short period of temporary impotence at some time. This is usually due to a psychological rather than a physical problem and is not a cause for concern.

How common is the problem?

It is common and affects at least 3 in 10 males at 45 years and 2 in 3 males at 70 years.

What are the causes?

Most cases of erectile dysfunction (up to 75%) have a physical (organic) cause while the rest have a psychological (functional) cause.

Physical causes

- Ageing
- Alcohol excess
- Chronic illness
- Diabetes
- Nervous system disorders (e.g. stroke)
- Decreased circulation to penis
- Drug reactions, for example:
 - marijuana, cocaine, narcotics
 - heavy smoking (4 times the risk by age 50)
 - sedatives, tranquillisers, antidepressants
 - blood pressure drugs
- Hormone irregularities
- Surgery (e.g. prostate surgery)

Psychological causes

- Stress and fatigue
- Anxiety or depression
- Marital disharmony
- Guilt feelings
- Ignorance about sexuality
- Situational stresses, such as the presence of other people in the home (e.g. in-laws)

Sometimes we simply do not know what causes impotence. You can get an idea of whether you are functional by being aware of erections during sleep or morning erections or erections through masturbation.

What about getting old?

Although the risk of impotence increases with age, it is not inevitable. Most men keep the ability to get an erection, although more stimulation is usually required.

What tests need to be performed?

Tests will include blood tests and possibly special investigations for the function of your penis. Special sleep studies on erections during sleep can be performed.

How can it be prevented?

- Careful treatment of any medical problem such as diabetes is important.
- Avoid drugs of addiction, including common 'social' drugs.
- Discuss the effects of any medicines with your doctor.
- Do not have more than two standard alcoholic drinks a day.
- Cut down smoking.
- Promote sexual feelings:
 - have good communication with your partner
 - talk over any concerns
 - choose a good atmosphere for lovemaking.

What is the treatment?

Lifestyle

Reduce any high alcohol consumption and refrain from smoking (cigarette, cigar and pipe). Significant stress and overwork should be attended to.

Counselling for psychological causes

This will involve brief sexual counselling, for which you may be referred to a specialist clinic. It is important to attend with your partner.

New anti-impotence drugs

There are modern drugs that, taken by mouth, will restore the ability to get an erection upon sexual stimulation. They work by neutralising the enzyme in the penis that makes it go limp. This results in increased blood flow to the penis. Viagra was the first of these drugs—a 50 mg tablet is taken about 1 hour prior to intercourse. This dose can be doubled or halved according to the response. Newer drugs in this class include Cialis and Levitra. There will be other drugs in the future. These drugs do not invariably work as their effectiveness is related to the extent and severity of the problem.

Injections

A way to treat physical impotence is to give an injection of a special substance into the penis to achieve an erection. If a test dose works, you will be able to give yourself injections (up to a maximum of 3 a week) before you intend to have intercourse. The injection in common use is alprostadil (Caverject).

Other methods

There are other ingenious ways to achieve intercourse should your impotence be permanent. These include:

- a vacuum device to make the penis erect
- surgery to implant a firm but flexible device
- surgery to implant an inflatable device.

Foreskin hygiene

The normal foreskin in infants and children does not need special care and should not be forcibly retracted for cleaning from birth to 5 years of age. As a rule the foreskin will retract when it is ready and it should only be retracted by its owner.

Why is foreskin hygiene important?

If you have a foreskin, you owe it to yourself to practise correct hygiene, because failure to do this can result in an unpleasant smell, soreness, irritation and infection. Poor hygiene is associated with a greater risk of getting cancer of the penis and possibly with sexually transmitted infections. A man who neglects his foreskin may end up with a smelly and sore penis that could affect his sex life, for it will be obvious to his partner.

It is important to retract the foreskin and wash all of the area at least once a week. All males should practise proper hygiene from the age of 6 or 7.

Foreskin hygiene is very simple!

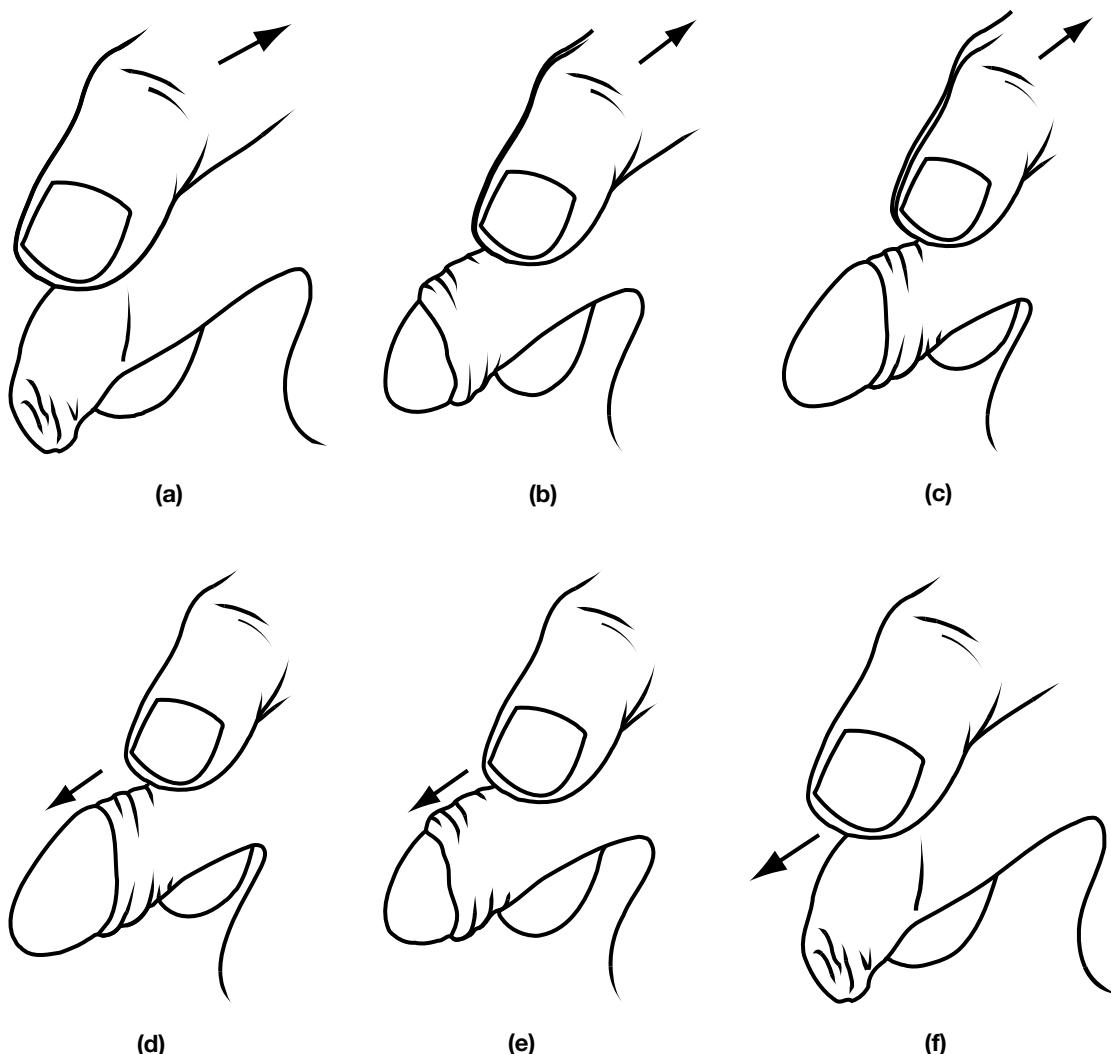
When you have your shower or bath, follow these steps:

1. Slide your foreskin back towards your body (diagrams (a) to (c)). A male older than 5 years should be able to slide his foreskin back. If you cannot, check with your doctor.
2. Wash the end of your penis and foreskin with soap and water. (Do not let soap get in the opening—it stings!)
3. After your shower or bath, dry the end of your penis and foreskin properly and replace the foreskin (diagrams (d) to (f)).

Do not forget to replace the foreskin, or it could get trapped back and cause unpleasant problems.

Also, when you urinate, slide the foreskin back just enough so that the urine does not get on the foreskin—this helps to keep it clean.

Do not forget—if you have any problems, see your doctor.



Cleaning the foreskin

Male pattern baldness

What do we mean by baldness?

Baldness is slow, painless hair loss that follows a distinctive pattern with increasing age. In most instances it is a natural process and in men it tends to run in the family. It is called androgenetic alopecia. Normally about 100 hairs on the scalp are shed every day and the hair is replaced about every 4 years. Approximately 60% of men have significant hair loss by 50 years of age.

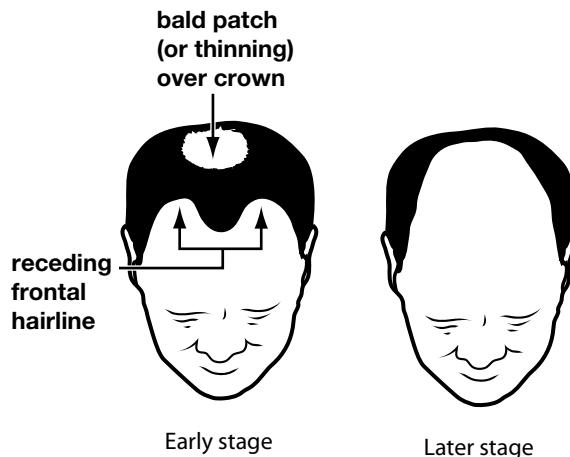
What is the pattern?

The normal pattern is for the front hairline to recede first in the temple and frontal areas while the hair thins over the crown (back top of head). This situation may remain for the rest of a man's life but in many these frontal and top areas eventually meet and continue while the whole scalp is affected. Some people experience short periods of considerable hair loss followed by a stable period of no loss. The earlier the hair loss begins, the greater the loss in the long run.

What is the cause?

Baldness is invariably a normal process that may follow a family tendency, indicating that genetic factors are important. Ageing is also a factor and hair thinning is inevitable in most people with advancing years. Hormones play an important part—men who are castrated when young don't go bald.

Rarely baldness is caused by a severe sudden illness in which hairs stop growing and then fall out in about 3 months. However, they will usually grow back. Certain illnesses such as thyroid disorders and iron-deficiency anaemia can cause diffuse hair loss. Some fungal scalp infections can result in bald patches.



Certain treatments, notably cytotoxic drugs (used to slow down cell growth in cancer), can cause loss of hair. It usually regrows when the drugs are stopped.

Some people are affected by a specific hair loss disorder called alopecia, which causes premature hair loss. It may occur as round bald patches (*alopecia areata*) but may spread to involve the whole scalp (*alopecia totalis*).

How common is baldness?

It is very common and each year 1 person in 300 consults a doctor about baldness, especially if it is unusual. Many others accept it and don't seek professional help.

What can be done?

Baldness is basically an incurable condition. Although it can be embarrassing and upsetting at first, most men are able to accept natural balding as part of the ageing process. Doctors generally encourage people to accept it. Cutting the hair very short does help and looks better than patches of straggly long hair.

If not acceptable, some options include wearing a toupee, a wig or other hair substitute or having a hair transplant operation. However, with hair transplantation the new hair is often just as likely to disappear as the original hair.

What about medications?

Medicated shampoos and ointments should not be used—they do not help. Do not get caught up with quick remedies. Neither vigorous brushing nor washing of the hair usually helps.

There are two drug treatments that can help, namely minoxidil lotion or gel, which is applied directly to the scalp, and finasteride, taken as tablets. However, it must be emphasised that these treatments are expensive, have variable results (good to no difference) and need to be taken for the rest of one's life if a response occurs. Hair loss usually resumes when treatment is stopped.

You can discuss the use of medications with your doctor.

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Prostate: prostate cancer

What is the prostate gland?

The prostate gland, which is present at the base of the bladder, is found only in men. It is the size of a walnut and produces some of the fluid in semen. In prostate cancer some of the cells in the gland become diseased and grow into a malignant tumour, which can vary in seriousness from one person to another.

How common is prostate cancer?

It is the most common cancer in Australian men and the second most common cause of death from cancer in men. It affects 1 in 10 Australian men up to 75 years and 1 in 5 by 85 years and is diagnosed mainly in men over 50 years of age. Many older men die ‘with’ their prostate cancer, rather than from it.

What are the symptoms?

Most prostate cancers, especially early cases, do not produce symptoms. When symptoms develop they may include:

- frequent urination, especially during the night
- difficulty starting and stopping urination
- dribbling of urine
- pain or a burning sensation on passing urine
- a feeling of incomplete emptying of the bladder
- urgency—needing to get to the toilet quickly
- pain during ejaculation
- blood in the urine or semen.

What is the cause of prostate cancer?

We still do not know the exact cause. Risk factors include:

- increasing age, especially over 75 years
- family history and genetic factors—a first-degree relative (father or brother), especially if onset relatively young (before 60)
- race—more common in black men, especially African-Americans
- diet (possibly)—diet high in fats and low in fish, fruit and vegetables (low nutrients e.g. selenium).

How is it diagnosed?

There are a few key tests to diagnose prostate cancer namely:

- digital rectal examination (DRE)—a doctor using a gloved finger may feel if the prostate is enlarged, hard or unusual
- prostatic-specific antigen (PSA) test—this special blood test, if elevated, may indicate the presence of cancer
- biopsy—several samples of prostate tissue are taken with ultrasound guidance in the rectum and examined in the laboratory.

What is the treatment?

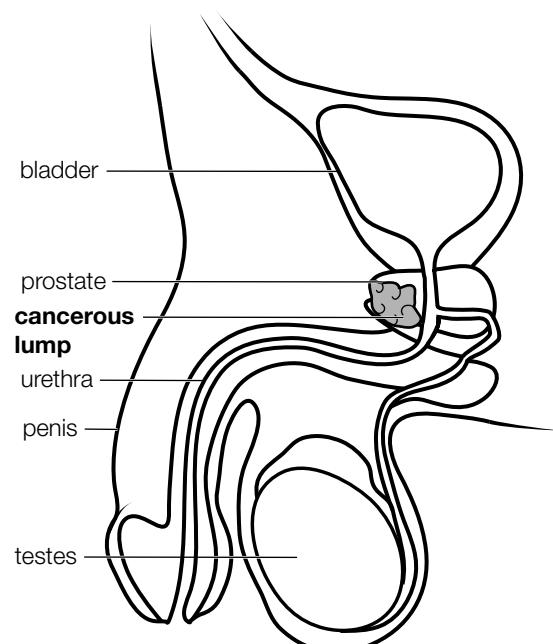
There are a number of treatment options depending on several factors, such as the man’s age, physical condition,

grade and stage of the cancer (early or advanced) and personal preference. The grading of the cancer is done by the Gleason score (1 to 10) where 2 to 4 is low grade and 8 to 10 high grade.

- **Watchful waiting.** Sometimes your doctor will advise against treatment, especially if minimal symptoms, low grade, slow growing and age over 75. However, you will need to be watched carefully including regular PSA tests.
- **Surgery.** Removal of the prostate, called a radical prostatectomy, is aimed at curing the cancer. If this is not possible, any blockage can be relieved by a transurethral resection of the prostate.
- **Brachytherapy.** A radioactive implant is placed inside the prostate to destroy cancer cells. The implant may be temporary or permanent.
- **Hormone therapy.** This reduces testosterone, which is necessary to help the cancer grow. Sometimes removal of the testicles is used to cut hormone levels.

What are the screening guidelines for prostate cancer?

Screening of men without symptoms is controversial. Screening tests include the PSA blood test, rectal examination (DRE) and ultrasound. It is recommended after 40 years of age in men with a positive family history. There is no national screening program in most countries, including Australia. However, men should make their own decision after being fully informed of the potential benefits, risks and uncertainties of testing. It is of limited value after 70 years and not advisable after 75 years.



Prostate: prostatitis

What is prostatitis?

Prostatitis is inflammation of a man's prostate gland, which is a gland about the size of a walnut that lies just beneath the bladder. There are two main types of prostatitis—acute and chronic. Acute prostatitis, which is more severe, develops suddenly and makes you feel quite ill because of infected pus in the gland. In chronic prostatitis the onset is slower and the symptoms, which are milder, tend to drag on or come and go and linger indefinitely. It is not contagious.

What is the cause of prostatitis?

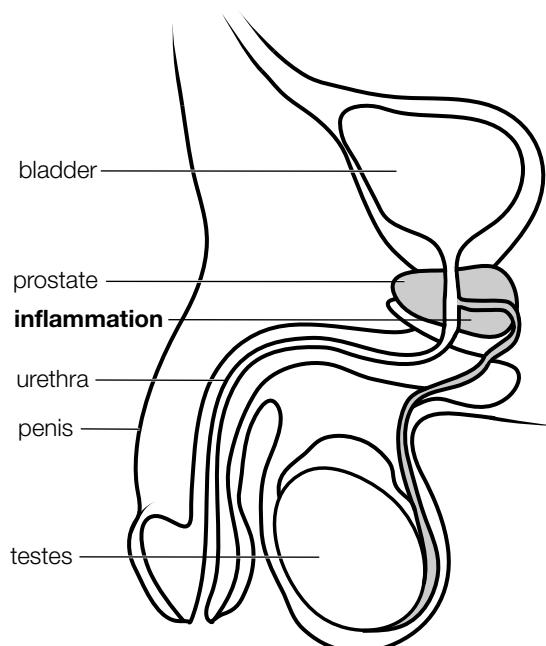
Prostatitis is usually caused by infection from the common bacteria associated with urinary tract infection. The bacteria that live in the bowel may travel up the urethra and cause cystitis (infection of the bladder) or prostatitis or both. Some conditions that cause obstruction to the flow of urine commonly predispose to prostatitis. This particularly applies to older men with an enlarged prostate. Damage to the prostate, such as following surgery to the prostate, is also an important cause. Sexually transmitted infection is an uncommon cause.

What are the symptoms?

In an acute attack you usually feel very sick with a high fever and chills (like having the flu) and pain in and around the penis, which may be felt around the scrotum, anus and lower back.

Symptoms common to both acute and chronic prostatitis are:

- painful (stinging or burning) urination
- frequency of urination with waking to urinate at night



- urgent need to urinate
- urinary irritation
- difficulty starting urination
- poor urinary stream
- painful ejaculation of semen.

Occasionally the symptoms can be mild and almost imperceptible. Blood may be seen in the urine.

What tests are usually done?

Your doctor will examine your prostate by feeling it with a gloved finger in the rectum. A specimen of urine will be taken to test for infection and look for bacteria to work out the best antibiotic to treat it.

What are the complications?

Prostatitis may lead to infection elsewhere in the urinary tract, such as in the bladder, testicle and kidney. Rarely the infection can get into the bloodstream causing septicaemia. It can also fester and develop pus as an abscess, which may require surgery. If not treated, it can cause a fistula.

What is the treatment?

- Rest. It is important to rest if you are feeling feverish and unwell.
- Pain relievers. Take regular analgesics such as ibuprofen, paracetamol or aspirin to relieve pain and fever (if present).
- Antibiotics. Your doctor will prescribe a course of antibiotics if the cause is bacterial infection. This is usually required for 6 weeks.
- Ample fluids. It is important to drink lots of water—a minimum of 2 litres of water daily to keep up a good flow of urine.
- Diet. Avoid caffeine, particularly coffee, reduce alcohol to a minimum and avoid spicy foods
- Intercourse. Continue as usual; it is not harmful and evidence indicates that moderate sexual activity helps.
- Hot baths. Sitting in a tub of hot water (salt can be added) is good, especially if pain extends to the anus.
- Avoid constipation. Keep the bowels regular with a good diet or stool softeners (laxatives) if necessary.

What is the outlook?

Prostatitis is usually curable with the above treatment, especially if a full course of antibiotics is taken. However, recurrence can be a problem.

Prostate: the test for prostate cancer

Facts about prostate cancer testing

The screening test for healthy men is controversial and is not recommended for all men. It is most appropriate to read this information sheet before you make a decision to have prostate cancer testing and before your next visit to your doctor. He or she will be happy to discuss this complex issue with you.

It is a fact that prostate cancer is relatively common, affecting about 1 in 5 Australian men in their lifetime. About 3000 Australian men die from prostate cancer each year and aggressive forms of life-threatening prostate cancer are increasing. Testing is a complex issue because there is no simple or accurate test and investigation of an abnormal test may have serious consequences.

Early prostate cancer is invariably silent, so prostate cancer testing is the best way to detect the disease before you experience any symptoms.

The current tests

Initial testing involves a blood test for prostate-specific antigen (PSA) and a digital rectal examination (DRE). However, only a prostate biopsy provides definitive information about whether you have a benign condition or if your cancer is slow growing (relatively harmless) or aggressive (life-threatening).

Risks of testing

If you have an elevated or rapidly rising PSA test and/or an abnormal rectal examination, a prostate biopsy may be recommended. This procedure is performed by inserting a needle into the prostate gland, and may be painful and associated with infection. In addition, a prostate biopsy does not always exclude cancer, as biopsies may miss up to 30% of prostate cancers, or may falsely test positive for cancer where none exists. Hence, testing may prompt unnecessary or inaccurate biopsies and create a lot of anxiety for you while you are undergoing repeated tests for what is often a benign condition.

On the other hand, if prostate cancer is diagnosed, you may experience a lot of anxiety while monitoring your disease and you may be tempted to undergo unnecessary or ineffective treatments. Unfortunately, life may not be prolonged with

treatment, but may be made very miserable if you experience complications such as incontinence and erectile dysfunction (impotence). In this situation, you may ask yourself why you had testing in the first place, as diagnosis and treatment may have resulted in distress without any benefit.

Benefits of testing

Prostate cancer testing may detect early aggressive and potentially life-threatening cancer when a cure may still be possible. When a tumour is small and at an early stage, it is technically easier for your surgeon to remove all your cancer (and therefore achieve a potential cure), while preserving your vital tissues and nerves (a nerve-sparing radical prostatectomy), resulting in fewer serious complications such as urinary incontinence and erectile dysfunction.

Current recommendations

Prostate cancer testing is usually recommended after the age of 40 if you have a strong family history, which is that of a first-degree relative with prostate cancer before 60 years. There is not much evidence that it is of value after about 70 years, and it is not usually recommended after 75 years.

Otherwise healthy men aged between 40 and 70 are advised to make an individual choice with the assistance of a doctor, after being fully informed of the potential benefits, uncertainties and risks of testing.

Ultimately, your choice will depend on whether you would prefer:

- to have an early diagnosis of prostate cancer and be involved in making decisions about nerve-sparing radical prostatectomy and other treatment options, particularly if the cancer is early, aggressive and potentially life-threatening (high Gleason score on biopsy), or
- not to know if you have prostate cancer, in view of the uncertainties surrounding testing and the inevitable anxiety associated with monitoring relatively harmless cancers, which may result in unnecessary surgery or serious treatment complications with very little benefit.

Most medical authorities, including the Royal Australian College of General Practitioners, do not recommend PSA testing in healthy men with no symptoms of prostate cancer.

Prostate: your enlarged prostate

What is the prostate gland?

The prostate is a walnut-sized gland that surrounds the opening of the bladder and about the first 2.5 cm of the urethra (the tube passing from the bladder to the penis). It produces fluids that make up part of the semen.

What causes 'trouble with the waterworks'?

This is usually caused by enlargement of the prostate gland. Nearly every man over 45 years of age has some degree of this enlargement, which is called benign prostatic hypertrophy (BPH). Hypertrophy of the prostate is not dangerous, but it tends to squeeze and obstruct the urethra, making it difficult for the urine to pass through. Some drugs cause problems when an enlarged prostate is present. These drugs include alcohol, some drugs used to treat depression, Parkinson's disease and irregular beats of the heart, and over-the-counter ephedrine-like compounds for coughs and colds.

How common is the problem?

Although enlargement of the prostate is common in men over 45, it rarely causes trouble before 50. By the age of 55 at least 50% of men will have 'waterworks trouble'. This increases to 80% of men over 80. Serious urinary trouble affects 2 in 10 elderly men.

What are the symptoms?

The symptoms, which are referred to as lower urinary tract symptoms (LUTS), can be variable and include:

- more frequent urination than usual
- an urge to urinate without much warning
- waking at night with the urge to urinate
- difficulty passing urine
- difficulty starting and sluggish stream, especially first thing in the morning
- a tendency to dribble after urinating, with wetting of pants
- a need to urinate a second time after only 20 minutes (poor emptying).

Pain is a rarely a problem, unless an infection is also present.

What are the risks?

More serious problems include:

- infection of urine
- sudden blockage (called acute retention of urine)
- slow blockage (called chronic retention of urine).

If the obstruction is severe, a catheter (a plastic tube passed along the urethra) will usually be necessary to relieve the obstruction.

What will your doctor do?

Your doctor will perform a rectal examination with a gloved finger to feel the prostate and then may refer you to a urologist for special tests, for example tests to make sure the symptoms are not caused by cancer of the prostate. Tests to look for prostate cancer include ultrasound and a PSA (prostate specific antigen) blood test. However, having prostatic hypertrophy does not actually increase the risk of prostate cancer. The doctor will check what drugs you are taking to make sure these are not aggravating the problem.

What is the treatment?

Non-surgical

At least 1 in 3 mild cases will not require an operation. Although we cannot cure an enlarged prostate, you can learn to live with it for some time.

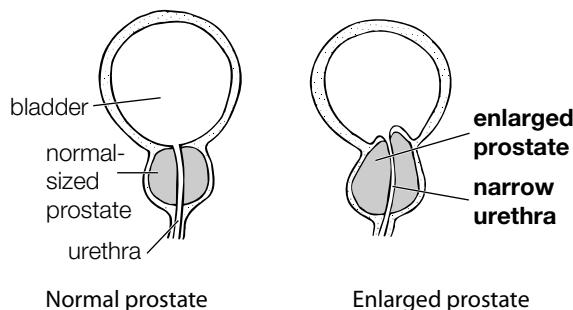
- Avoid or cut down alcohol, especially with and after an evening meal.
- Avoid fluids for at least 3 hours before retiring.
- Get up immediately at night when you wake up with the urge to go.
- Visit the toilet when you need to (do not hang on) and wait a while to make sure you empty your bladder completely.

Drugs

Fortunately there are now drugs that can improve the flow of urine in many patients. Some relax or shrink the prostate; others relax the bladder. Your doctor will prescribe them if appropriate.

Surgical

In some men, drugs aren't enough to relieve the symptoms, and they will need an operation. The most common operation is called a transurethral resection of the prostate (TURP), in which pieces of prostate are removed with electrocautery via a tube inserted through the penis. Newer treatments such as microwave or laser therapy can be used instead.



Prostate: your prostate operation

Why is the operation needed?

You have developed benign enlargement of your prostate, which cannot shrink by itself or with drugs. This enlarged tissue needs to be removed to allow your urine to flow normally from your bladder to your penis. If the obstruction continues, it can damage your bladder and possibly your kidneys. It may block off the urine completely and cause considerable pain. This emergency situation is called acute retention.

What will the operation do to my stream?

If successful, the operation will give you a good stream with full control, which you probably have not had for years. You will soon be able to pass urine normally without dribbling and will not have to get up more than once to urinate during the night.

How is the operation performed?

The classic operation is transurethral resection of the prostate (TURP), which is usually done through the penis. The urologist passes an instrument about as wide as a pencil through the urethra to cut away the enlarged prostate. This instrument (a resectoscope) has a loop of wire at its tip, which can cut tissue. It has a miniature telescope or camera and light to allow the surgeon to see clearly to slice and 'nibble' away pieces of the prostate from inside the urethra, thus making it nice and wide. Newer TURP methods include laser beam resection.

What anaesthetic will I have?

Usually a local anaesthetic is used—you will be made numb from the waist down for about 4 hours. This is done by giving a spinal injection. Sometimes a general anaesthetic may be necessary.

What happens after the operation?

A catheter is left in the urethra to drain the bladder for about 1 to 2 days. There is usually some blood loss for a few days. Taking the catheter out is simple and painless. You are in hospital for about 4 to 5 days. Although it tends to burn and be erratic at first, your urine stream will soon become strong and controlled.

What are the chances of becoming incontinent?

This is rare. Usually after 2 days of incontinence you begin to return to normal.

What about my sex life?

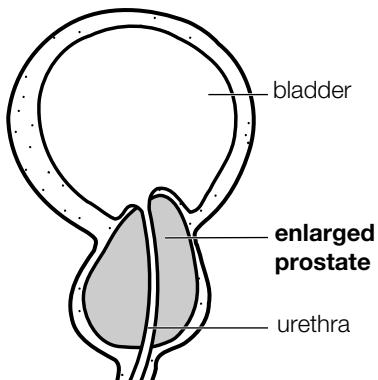
In most people the sexual desire and ability remains. The ability to get an erection soon returns and satisfactory intercourse is possible about 1 to 2 months later. You will have an orgasm, but you do not ejaculate fluid (semen) outwards. It goes back up into the bladder. This is quite harmless, and the fluid passes out later in the urine.

Can I become impotent?

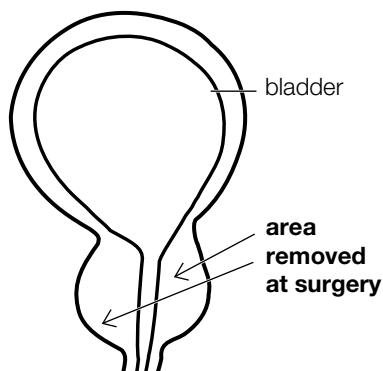
This can occur but is most unusual—fewer than 1 in 10 men have a problem. If you have had a problem before the operation, it is unlikely to improve it.

What happens after I leave hospital?

Like after any operation, you make steady and good progress, with gradual improvement of your urination. Sometimes infection and bleeding can cause minor setbacks. You should take it very easy for 2 to 3 weeks, but should be well enough to return to work in about 4 weeks.



Before surgery



After surgery

Scrotal lumps

The scrotum contains two testicles and their spermatic cords, plus muscle and other soft tissue. Lumps that develop in the scrotum are quite common and cause anxiety when detected but most are not serious. The lumps can be considered as:

- solid, such as cancer of the testicle and orchitis (inflammation of the testicle)
- fluid-filled (cystic), such as a cyst of the testicle and hydroceles
- lumps coming down from the abdomen (e.g. inguinal hernia).

The lumps can be diagnosed by clinical examination plus ultrasound investigation, which gives an accurate diagnosis. Any lump in the testicle should be investigated for cancer, which is an uncommon cause of a lump in the scrotum. The common lumps are as follows.

Hydrocele

A hydrocele is a large, soft swelling that completely surrounds the testicle.

Features

- Caused by a collection of clear, sterile fluid
- Can be huge in size
- Often the cause is unknown but it may follow an injury or testicular cancer
- Occurs in males of any age, especially baby boys and in older men
- Usually causes no symptoms but may cause a dragging discomfort
- Usually harmless and men learn to live with it

Treatment

A simple operation is the best way to remove a troublesome hydrocele.

In elderly men it is common to aspirate the fluid with a needle and syringe. This can be repeated as necessary as a hydrocele tends to keep filling up with the serous fluid.

Varicocele

A varicocele is a soft swelling or lump that surrounds the testicle. It is due to a large knot of varicose veins.

Features

- Almost always on the left side
- Caused by distension of the vein that drains the testicle, due to a faulty valve
- Lump is more noticeable when standing, usually disappearing on lying down
- May be no discomfort but some men feel a dragging discomfort, even pain, especially after exercise and in hot weather
- Linked with infertility in men but not proven

Treatment

No treatment is necessary if it causes no discomfort. Firm-fitting underpants or a jockstrap can be used for mild discomfort and swelling. Surgery, which is straightforward, is recommended for significant discomfort or if associated with reduced size of the left testicle or with infertility.

Cyst of epididymis of testicle

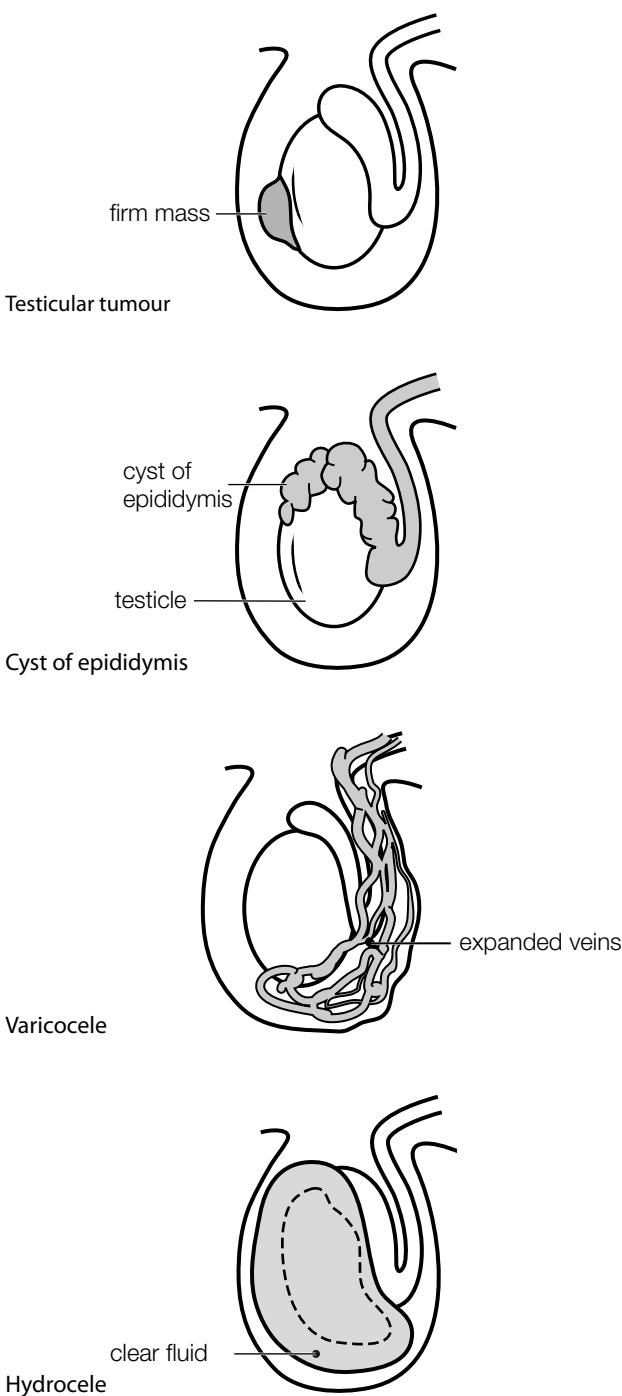
The epididymis is a sac that is connected to the testicle and lies just behind it. These cysts are common and usually harmless.

Features

- Usually in middle-aged to elderly men
- Contains a clear fluid or sperm
- May or may not cause discomfort: a dragging sensation

Treatment

No treatment is usually required and they can be left alone. Surgical excision is advisable if uncomfortable or unsightly. Needle aspiration is also an option.



Testicular cancer

What are the facts about testicular cancer?

The testicles (testes) are two oval-shaped, firm organs located in the scrotum. Cancer of the testicle is uncommon but nevertheless accounts for about 1 to 2% of malignant tumours in men. It mainly affects fit young men and is the most common malignancy in men aged 15 to 45 years. Usually only one testicle is affected.

There are two main types of testicular cancer:

- seminoma, which typically occurs between 25 and 50 years
- non-seminoma, which typically occurs under 35 years (from 15 years onwards).

What are the symptoms and signs?

- A lump in the testicle, which is usually painless
- Loss of sensation in the testicle
- Sensation of heaviness in the scrotum
- Possible ache or pain (in about 15% of men)

There may be an associated swelling such as a hydrocele or an inflamed testicle.

What is the cause of testicular cancer?

Abnormal cells form and multiply in an uncontrolled way to form the malignant tumour. The exact cause is unknown but the known risk factors are:

- an undescended testicle (5 times the risk)
- an operation to 'fix' an undescended testicle
- withering of the testicle (e.g. following an infection)
- family history of cancer of the testicle
- previous cancer of the testicle
- severe trauma to the testicle
- prolonged heat exposure
- Klinefelter syndrome (a genetic condition in which males have an extra X chromosome)
- HIV/AIDS (may be a slightly higher risk).

How is it diagnosed?

The cancer is usually diagnosed by:

- the person feeling a lump
- his doctor examining the testicles and scrotum
- ultrasound examination, which is very effective
- blood tests called 'tumour markers'.

What is the treatment?

The outlook is very good for most testicular cancers with a 5-year cure rate of 90 to 95%, especially if operated on at an early stage. The gold standard of treatment is surgery (an orchidectomy) by a urologist through an incision just above the scrotum. The results are particularly good for seminoma, which is very sensitive to treatment with radiotherapy. Treatment methods include:

- surgery to remove the testicle plus lymph glands if spread has occurred
- radiotherapy, where X-rays are directed in a concentrated beam at lymph glands (very effective for seminoma and any remaining cancer cells)
- chemotherapy with cancer-killing drugs—this is very effective for all types of testicular cancer but is used mainly for non-seminoma cancer.

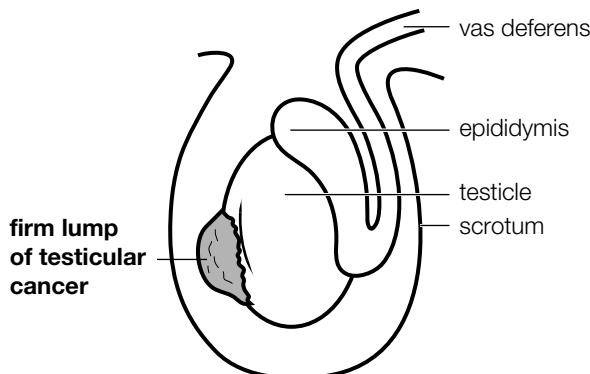
Follow-up management

It is standard practice to perform CT scans of the chest, abdomen and pelvis regularly every few months in the first 2 years and then less often after that.

Blood tests for special 'marker' chemicals released by the cancer, such as alpha-fetoprotein, are usually performed at each visit.

What are the after-effects of treatment?

Sexual function is not usually affected. The loss of one testicle has little effect on fertility, as the remaining testicle usually continues to make ample sperm.



Testicular self-examination (TSE)

Why bother with TSE?

Although testicular cancer is rare, it is the most common cancer in men between the ages of 15 and 34 years.

With early detection and recent advances in chemotherapy, testicular cancer is one of the most easily cured cancers. Some patients are only diagnosed after the tumour has well and truly spread into the body, but even these patients can respond well to modern treatment.

That's why young men who are at risk of testicular cancer should carry out regular monthly self-examination of the testes. Those at risk are those with:

- a family history of testicular cancer
- testicular atrophy (e.g. mumps, trauma)
- delayed repair of undescended testes
- previous testicular cancer.

There is currently no evidence that regular self-examination of the testes prevents deaths from testicular cancer in young men who are not at risk of testicular cancer. Nevertheless many doctors do still recommend that all young men do regular self-examination of their testes, regardless of whether they are at risk or not. Being familiar with the look, feel and shape of your testes will help you detect any changes early, when the chances of a cure for testicular cancer are at their highest.

What are the causes of testicular cancer?

They are not exactly known, but some factors that may lead to it are an undescended testicle, trauma (injury), heat exposure and heredity.

What are the symptoms?

The usual symptoms of testicular cancer include a lump on the testicle, painless swelling and a dull ache or heavy dragging sensation in the lower abdomen, groin or scrotum. The early symptoms are therefore mild and tend to be overlooked.

How to do TSE

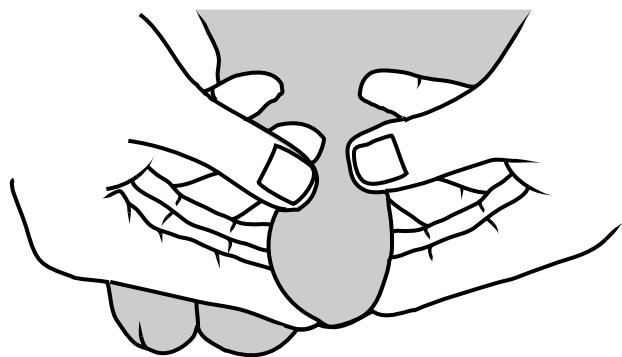
Testicular self-examination is a simple procedure. The examination should be done about once a month, preferably after a warm bath or shower, when the scrotal skin is most relaxed. Examination is best done using two hands, as illustrated.

- Using the palm of your hand, support your scrotum.
- Hold each testicle in the palm of your hand.
- Explore each testicle individually.
- Using both hands, gently roll the testicle between the thumbs and fingers. The testicle should feel firm and the surface smooth. If pain is experienced, too much pressure is being applied.

What to look for

It is normal for one testicle to feel slightly bigger than the other and for the left one to hang lower than the right. A normal testicle is egg-shaped, fairly firm to touch and should be smooth and free of lumps. When you examine the testicles, you should feel for any changes in size, shape, weight or consistency. If you do find something abnormal, most likely it will be an area of firmness or small lump on the front or on the side of the testicle.

Do not confuse the epididymis (the soft coiled tube-like structure at the back of the testicle) with a tumour. If you do find something abnormal, you should see a doctor as soon as possible. However, remember that not all lumps are due to cancer.



TSE technique



TSE is best performed after a warm bath or shower

Vasectomy

What is vasectomy?

Vasectomy, which is the most common method of sterilisation in men, is an operation in which the two 'vas' tubes (the *vas deferens*) are cut and tied. This blocks the flow of sperm from the testicles into the penis, so that when the man ejaculates the semen does not contain sperm.

How is the operation done?

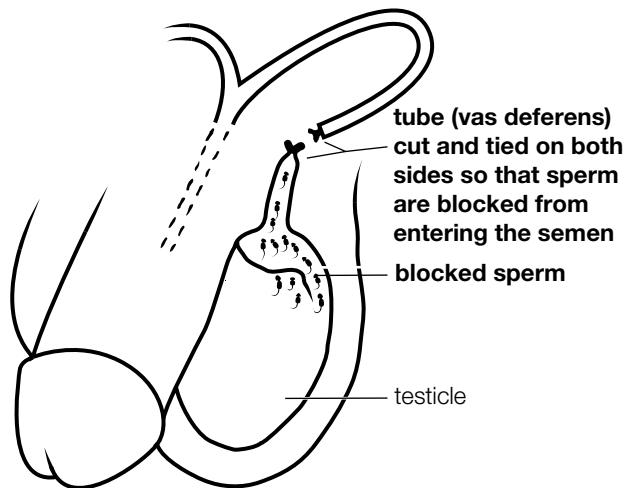
This simple operation, which can be performed under a local or a general anaesthetic, usually takes about 30 minutes. It is done through two small cuts in each side of the scrotum (bag) or through one cut in the middle. The 'vas' tube, which lies just below the skin, is picked up and cut. About 1 cm of it is removed; the ends are tied off and then cauterised with a hot needle.

How effective is a vasectomy?

Vasectomy is reliable because every precaution is taken to separate the tubes so that they do not rejoin. Despite this, about 1 in 500 vasectomies fail because the tubes somehow manage to rejoin.

Is the man sterile immediately?

No. It takes about 20 ejaculations to clear all the sperm from the tubes above the cut. About 2 to 3 months after the operation it is necessary to have 1 or 2 (preferably 2) sperm counts to make sure that the semen has no sperm. The semen has to be collected by masturbation and examined under a microscope.



Does vasectomy affect sexual function?

No. It makes no difference to a man's sex drive and performance. Some say that their sex life is improved because the worry about contraception is removed. Despite the absence of sperm in the semen, the fluid ejaculated seems normal because most of it is produced high in the tubes at the base of the penis.

Normal sexual activity can be started 7 to 8 days after vasectomy, but it is important to continue some form of birth control until the sperm count is zero.

What happens to the sperm?

Sperm are still produced in the testicles but lie around in the blocked tube for about 3 weeks before shrivelling up and being absorbed into the body in a similar way to blood after a bruise. Sperm make up only about 1% of the fluid ejaculated.

What are the side effects of vasectomy?

Bruising and swelling are common problems but settle after about 2 days. Bleeding and infection occur sometimes, but they settle quickly with treatment. A small lump caused by a build-up of sperm can develop at the operation site: these sperm granulomas usually settle themselves.

Can vasectomy be reversed?

The cut tubes can be rejoined by microsurgery, but there is no guarantee of regaining fertility. As a general rule about 40% of vasectomy reversals lead to successful pregnancy.

Vasectomy should be regarded as permanent and irreversible.

It is important to be definite about the decision to have the operation and not to have it under pressure.

Arthritis in the elderly

Arthritis means inflamed joints, and there are many types of arthritis. The most common type is osteoarthritis, which is a problem of wear and tear due to excessive use over the years and to old injuries in the affected joints. Most cases of arthritis are mild, and people cope with it. Arthritis does not necessarily get worse as you get older; sometimes it can get less painful (arthritis in the lumbar spine is a good example of this).

What are the symptoms of osteoarthritis?

- Pain, swelling or stiffness in one or more joints
- Pain or stiffness in the back or neck
- Pain and stiffness after heavy activity such as gardening or housework or long walks and on getting up in the mornings; light activity might actually relieve some of the symptoms
- Painful limp in the case of the hip and knee

Which joints are affected?

Osteoarthritis mostly affects the weight-bearing joints such as the spine, knees and hips. The base of the thumb, the ends of the fingers and the big toes are also common sites.

What is the treatment?

There is no cure, but there are many ways to make life more comfortable and keep you mobile and independent.

Diet

Keep your weight down to avoid unnecessary wear on the joints. No particular diet has been proved to cause, or improve, osteoarthritis.

Exercise

Keep a good balance of adequate rest with sensible exercise (such as walking, cycling and swimming), but stop any exercise or activity that increases the pain.

Heat

It is usual to feel more comfortable when the weather is warm. A hot-water bottle, warm bath or electric blanket can soothe the pain and stiffness. Avoid getting too cold.

Physiotherapy

This can be most helpful in improving muscle tone, reducing stiffness and keeping you mobile.

Walking aids

Shoe inserts, good footwear and a walking stick can help painful knees, hips and feet.

Medication

Paracetamol can be an effective painkiller in mild cases. If pain continues, doctors may recommend a group of drugs called non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen or naproxen. They should be taken with food. These drugs may have side effects in the stomach or intestine,

so inform your doctor if you have had a peptic ulcer or get indigestion. There are new drugs that are kinder to your stomach. Some people find over-the-counter remedies such as glucosamine can help bring relief. Consult your doctor to find the right medication for you.

Special equipment

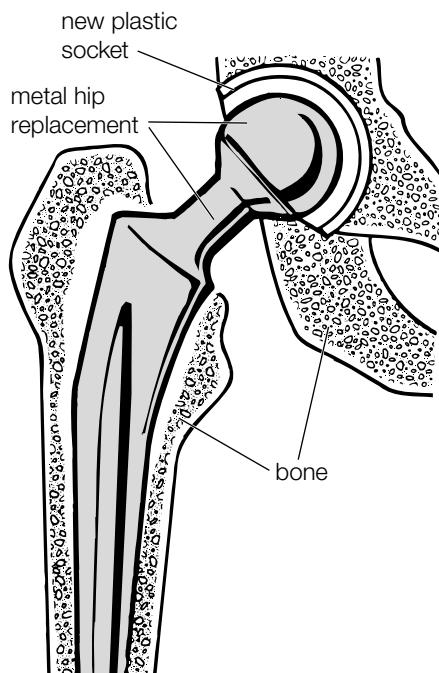
It is possible to increase your independence at home. There is a wide range of inexpensive equipment and tools that can help with cooking, cleaning and other household chores. These can be discussed with your physiotherapist or occupational therapist.

Surgery

Modern surgery can give excellent results with relief of severe pain for most joints. The new techniques and artificial joints are improving all the time, and so there is no need to suffer with prolonged severe pain.

Osteoarthritis of the hip

Replacement of your worn-out joint with an artificial hip made of a combination of metal or plastic is a very common operation. More than 90% of these are most successful.



Total hip joint replacement

Osteoarthritis of the knee

Corticosteroids or lubricating fluids for the knee can be injected directly into the knee and can provide temporary relief.

Modern knee replacements are also giving excellent results, and if you have crippling knee pain this operation can give great relief.

What is dementia?

Dementia is a disorder in which a previously normal brain does not function normally and the affected person becomes confused, forgetful and out of touch with the real world. It is rare in people under 65 years of age and appears more likely to develop with increasing age. It tends to progress slowly after it develops. So early signs are subtle and vague, and dementia may take some time to be obvious. The cause is not always known, but dementia can follow brain damage from physical abuse such as boxing, excessive alcohol and other drugs, and hardening of the arteries to the brain. There is a genetic tendency to early dementia in some families.

What is Alzheimer's disease?

This refers to the most common type of dementia in which there is wasting of some brain cells, the cause of which is uncertain. It can occur at any age, but when it develops at a relatively young age (under 65) it is referred to as presenile dementia. It is sometimes familial (inherited), although anyone can develop Alzheimer's disease. It is more common in people who have some other condition such as Parkinson's disease or Down syndrome. Another common type of dementia is vascular dementia, which is caused by multiple 'mini-strokes' caused by disease of the small arteries in the ageing brain.

What are the symptoms?

There are 10 key features or warning signs:

1. The main feature is loss of memory of things that have happened recently. You will notice that the person cannot remember what has happened a few hours (or even moments) earlier but can clearly remember events in the past.
2. Apathy and loss of initiative
3. Misplacing things
4. Problems with language (e.g. finding the right word)
5. Difficulty performing familiar tasks
6. Disorientation in time and place
7. Poor or decreased judgement (e.g. driving)
8. Problems with abstract thinking (e.g. balancing a cheque book)
9. Personality changes, such as being suspicious, irritable, humourless, uncooperative or aggressive, overfamiliar
10. Changes in mood and behaviour (e.g. rapid mood swings, withdrawn, confusion, restless)

The problem occasionally results in marked emotional and physical instability. It is sad and difficult for relatives to watch their loved ones develop aggressive and antisocial behaviour, such as poor table manners, poor personal cleanliness, rudeness and a lack of interest in others. Sometimes severe problems such as violent behaviour, sexual promiscuity and incontinence will eventuate.

How is it diagnosed?

A correct diagnosis is very important. GPs are often the first to diagnose it by doing a mental state examination on a person and then, if they suspect dementia, referring the person to a specialist or specialist clinic such as a Cognitive, Dementia and Memory Service clinic for evaluation and further tests.

How common is dementia?

The older a person gets, the more likely they are to have dementia. The incidence is probably about 1 person in 10 over 65 years, 1 in 5 over 80 years and 7 in 10 at 100 years.

What are the risks?

A person with dementia is always at risk of accidents in the home involving fire, gas, kitchen knives and hot water. Accidents at the toilet, in the bath and when crossing roads may be a problem, especially if dementia is combined with failing sight and hearing. These people should not drive motor vehicles.

Without proper supervision people with advanced dementia are likely to eat poorly, neglect their bodies and develop medical problems such as skin ulcers and infections. They can also suffer from malnutrition and incontinence of urine or faeces.

What is the treatment?

If you suspect that a friend or relative has early dementia, take him or her to the doctor for assessment. If they will not cooperate, contact an aged care assessment team. There is no cure, but some modern drugs may improve the symptoms in some people for a limited time—in the order of 6 to 12 months. Ask your doctor about this. However, the best that can be offered is tender, loving care.

Regular home visits by caring, sympathetic people are important. Such people include relatives, friends, general practitioners, district nurses, home help, ministers of religion and Meals-on-Wheels. People with dementia tend to manage much better in the familiar surroundings of their own home.

Special attention should be paid to organising memory aids such as lists, routines and medication, and to hygiene, diet and warmth. Adequate nutrition, including vitamin supplements if necessary, has been shown to help these people.

Support groups

It is important to contact an Alzheimer's support group in your state or locality. One such special support and advisory group is called ADARDS (the Alzheimer's Disease and Related Disorders Society).

Eye problems in older people

Many older people have no problems at all with their eyes and vision, with most maintaining good eyesight into their eighties.

However, natural physical changes can cause some problems with age, and disorders such as cataracts and glaucoma are more likely to occur. Older people generally need brighter light for everyday tasks such as reading, cooking, mending and driving a car.



Common eye complaints

Presbyopia

This is a common disorder first noticed after the age of 40 (usually 45 years onwards) when a change in the eye muscles and lens caused by loss of elasticity makes reading more difficult. You can read only by holding the material at arm's length. This applies to small print such as in telephone books and street directories. It is a focusing problem, which is easily corrected by having reading glasses with a convex lens.

Every few years you will need slightly stronger spectacles to allow for decreasing ability to focus. Bifocal lenses may be needed if you have another eye problem.

Floatters

A common complaint is of seeing tiny spots or specks that float across the eye, especially in bright light. They are normal and usually harmless but may be a warning of impending eye problems. If they become more noticeable or cause flashes of light, report to your doctor.

Excessive tears

Excessive tears are usually a sign of increased sensitivity of the eyes to wind, light or temperature changes. This complaint is very common in a cold wind. It can be minimised by wearing glasses, especially sunglasses, in those conditions. However, it may indicate blocked tear ducts (lacrimal ducts) or an eye infection, and so an eye check is recommended.

Dry eyes

This is caused by a reduced production of tears by the tear glands. It can cause many problems, such as blurred vision, itching or burning. It is easily corrected by using artificial tears.

Common eye diseases

Glaucoma

Glaucoma is caused by too much fluid pressure in the eye, which can lead to blindness. It comes in two forms: the rarer acute form (which causes sudden pain and visual problems) and the common chronic form (which slowly develops without any early symptoms). It is important to have any unusual eye symptoms checked, and all elderly people should have eye tests (including eyeball pressure) every 2 to 3 years. When detected, it can be treated and blindness prevented.

Cataracts

Normally the lens within the eye is clear and allows light to pass through it. A cataract is where the clear lens becomes cloudy or opaque and cuts down the light entering the back of the eye. Apart from deterioration of vision, there are no other symptoms. Cataracts can occur in anyone but are more common in diabetics and those taking cortisone as tablets or by inhalation. Cataracts can also run in families. They are diagnosed during an eye examination. A modern lens implant (an artificial lens placed in the space left by the cataract lens) can give excellent results.

Macular degeneration

The macule is a vital area of the retina near the optic nerve that is responsible for the fine detail of sight in the central field of vision. Degeneration of the macule is a feature of older people, and is caused by a faulty blood supply. It comes on gradually and is painless. If your central vision appears blurred or fuzzy and sharp vision is affected, you should report the problem immediately.

Retinal disorders

Disorders of the retina (the photosensitive area of the eye) can lead to varying degrees of blindness. Diabetes and other diseases can cause retinal problems. Sometimes the retina can become detached and seriously affect your eyesight. Retinal detachment can be treated successfully if detected early.

Tips

- Light bulbs are better than fluorescent lights.
- Have regular checks for blood pressure and diabetes.
- Have an eye examination every 2 to 3 years.
- Eye problems tend to run in families.

Falls in older people

The problem of falls in older people

Falls are the most common accidents in older people and most serious in people over 65 years as our reflexes deteriorate with age. It is a particular problem in people with brittle bones—osteoporosis. About 5% of falls result in a fracture.

How common is the problem?

About 30% of people over the age of 65 experience at least one fall per year, with 1 in 4 of these having a significant injury. More falls occur in the evening and at night, due to decreased light and tiredness.

Common causes of falls

General physical factors

- Increasing age
- Poor physical function
- Eyesight—impaired vision
- Impaired lower limb strength
- Impaired balance and walking
- Low morale/depression
- Drug usage especially sedatives
- Poorly supporting footwear

Medical conditions

- Medication
- Cardiovascular disease
- Low blood pressure
- Stroke
- Eyesight disorders (e.g. cataracts)
- Poorly controlled diabetes and epilepsy
- Arthritis/foot disorders
- Parkinson's disease
- Balance disorders (e.g. Ménière's syndrome)
- Psychological conditions
- Dementia or delirium

Hazards in the home

- Slippery surfaces (e.g. wet floors, shower, bath)
- Loose mats
- Uneven paving or pathways
- No handrails on stairs
- Poor lighting
- Loose objects on floor (e.g. children's toys)

What are the risks?

Risks include fractures, especially of the femur or spine, head injuries, particularly falling against something sharp and dangerous, and burns against a heating appliance or boiling water.

What should be done to prevent falls?

Medication

Be aware that taking medicines can put you at risk because many can make you giddy and reduce your alertness. This effect is aggravated by taking alcohol. Discuss the effect of medication with your doctor and pharmacist.

Physical strategies

Falls can be prevented by the following rules, irrespective of age:

- Walking aids. If you are unsteady on your feet (even slightly) use a single-point stick or a walking frame.
- Footwear. Wear good-fitting shoes or slippers with non-slip soles; avoid long or loose shoelaces.
- Eyesight. If you require glasses, make sure you wear them. Don't walk around with reading glasses, especially on stairs (take them off when moving around).
- Good lighting indoors. Avoid wandering around in the dark. Make sure you have a bedside lamp or night light in the bedroom for getting out of bed at night. Also have a good torch by the bedside.
- Good lighting outdoors. Make sure that steps and stairs are brightly lit. White paint or flush metal edges on the corners of the steps are useful.
- Supportive railings. Install strong railings along all indoor and outdoor steps.
- The bathroom. Fit secure handrails in easy reach near the bath, shower and toilet. Use non-slip mats alongside and inside the bath or showers. Use liquid soap in preference to soap bars.
- Climbing. Avoid standing on chairs, stools or ladders to reach things. Store clothes and frequently used items within comfortable reach.
- Loose mats. Ensure that carpets and other floor coverings are secure around the edges. Avoid loose mats or rugs, especially on shiny, polished floors.
- Loose wires and cords. Do not allow wires or cords from electrical appliances to be exposed or run loosely along the floor.
- Clutter. Make sure rooms are kept as clutter-free as possible, especially where older people move around. Children's toys are a particular hazard. Be particularly careful of pets especially dogs in the house (and also outside).

Physiotherapists and occupational therapists

These therapists can provide valuable advice about aids and safety in the home. Physiotherapists can assess and improve balance skills, flexibility and activity of people, including those with disorders such as Parkinson's disease.

Hearing impairment in older people

Loss of hearing tends to gradually increase with advancing age. Every year after the age of 50 we lose some of our hearing ability. As many as 25% of people aged 60 to 70 report hearing impairment. The decline varies from person to person and, like greying of hair, occurs at different rates.

What are the symptoms?

The symptoms vary, so that some barely notice a problem while others are severely disabled.

Common symptoms include:

- inability to hear speech and other sounds loudly enough
- inability to hear speech and music clearly, even when it is loud enough
- inability to understand speech, even when it is loud enough (a problem of language reception).

People with mild hearing loss notice only subtle differences and may have trouble hearing certain high frequency sounds such as s, f or th. They may also have trouble hearing in certain situations, such as at a party or in a crowd where there is a lot of background noise. Those with moderate hearing loss have trouble hearing in many situations.

In very old people, deafness can lead to unexpected behavioural problems such as confusion, agitation, anxiety, depression and paranoid delusions.

What are the causes?

Hearing loss takes two forms: conduction loss, where the sound waves are blocked in their passage to the inner ear, and neurosensory loss, where the inner ear cannot pick up the sound waves properly and thus transmit them to the brain.

Causes of conductive deafness (usually reversible)

- Too much wax in the ears
- Other debris in the ear canal (e.g. cotton bud tip)
- Ear infection
- Faulty vibrating bones (otosclerosis)

Causes of neurosensory deafness (usually not reversible)

- Nerve damage
- Exposure to loud noise, including sudden explosions
- Certain drugs

- Brain tumours
- Presbycusis

What is presbycusis?

Presbycusis (pronounced ‘prez-bee-ku-siss’) is also known as ‘old age’ deafness and is the most common type of hearing impairment in older people. It is caused by wear and tear in the very delicate workings of the inner ear. It does not cause total deafness but difficulties in understanding speech, especially with background noise.

What are some features of presbycusis?

- Inability to hear high-frequency sounds
- Usually an association with tinnitus (ringing in ears)
- A genetic tendency to the problem
- Intolerance of very loud sounds
- Difficulty picking up high-frequency consonants (e.g. f, s), which are often distorted or unheard

People with presbycusis frequently confuse words such as fit and sit, math and mass, fun and sun. They often say ‘Don’t shout—I’m not deaf’.

What signs indicate that hearing should be tested?

- Speaking too loudly
- Difficulty understanding speech
- Social withdrawal
- Lack of interest in attending parties and other functions
- Complaints about people mumbling
- Requests to have speech repeated
- Complaints of tinnitus
- Setting television and radio on high volume

Patients are usually referred to an audiologist after a medical check.

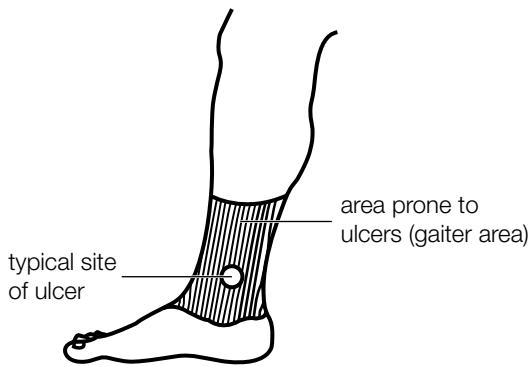
What can be done?

If medical problems such as fluid or wax in the ear are not present and ‘old age’ deafness is proved on testing, a hearing aid is usually fitted. There is no cure for the problem and hearing aids are not the perfect answer. However, modern hearing aids can be tailor-made for the individual person and are usually quite effective.

Leg ulcers

What are leg ulcers?

Leg ulcers are abnormal 'holes' that occur in breaks in the skin in the lower leg. Ulcers can occur in any person, but the elderly who have poor circulation are most likely to develop ulcers. They usually occur in the area known as the gaiter area of the leg. Twice as many women as men are affected.



What is the cause?

Ulcers are usually caused by a combination of two problems: rather sluggish circulation to the leg and poor drainage due to varicose veins. The further the distance is from the pump (the heart), the more likely the area is to be affected by poor circulation, so that the ankle area is the most vulnerable. The skin becomes thin, and because injuries such as those from knocks or scratches are common here the skin tends to break down and heal poorly. The small crack in the skin may enlarge and gradually become an ulcer.

What are the symptoms?

The ulcer has dead tissue in it and usually weeps. The most common site is the skin on the inside of the leg just above the ankle. The skin around the ulcer usually becomes red, itchy, flaky and discoloured. Many are not painful, just uncomfortable, but those due to very poor circulation can be quite painful, especially if on the foot.

What are the problems?

Slow healing is the main problem. This is usually not a serious problem, but an ulcer can take months or years to heal in an older person. Ulcers in younger persons usually heal in a few weeks. Those with diabetes or peripheral vascular disease (clogged arteries) heal slowly. Rarely, the ulcer is due to an infection or can develop into skin cancer and therefore needs careful medical attention.

What is the treatment?

Self-help

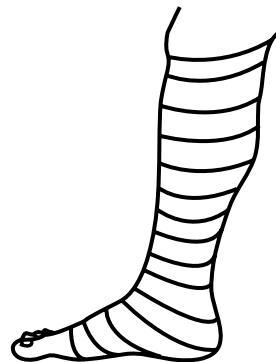
The key to healing is to keep the leg elevated as much as possible and also to keep fluid out of the leg, which is helped by a firm bandage. Raising the legs above the level of the heart reduces swelling and quickens healing. Avoid standing

for long periods, but undertake moderate walking exercise. Avoid smoking and have a nutritious diet. Be extremely careful not to injure the leg, as the skin of the legs is fragile. Do not scratch, watch out for sharp stakes in the garden and be careful of hot-water bottles.

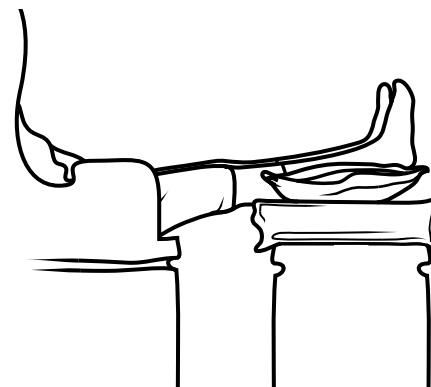
Keep ulcers covered and sterile (ulcers require moisture to heal).

Medical help

The ulcer will require regular dressings to keep it clean and free from infection. Special substances may be added to clean out the debris in the ulcer. A nurse may be able to call regularly to dress the ulcer. It is usually better to keep the dressing on for a few days. You will be provided with a knee-high elastic bandage or a thick elastic stocking to wear during the day. It may be necessary to apply a skin graft to promote the healing.



An elastic bandage helps healing



Rest and elevate the legs as much as possible

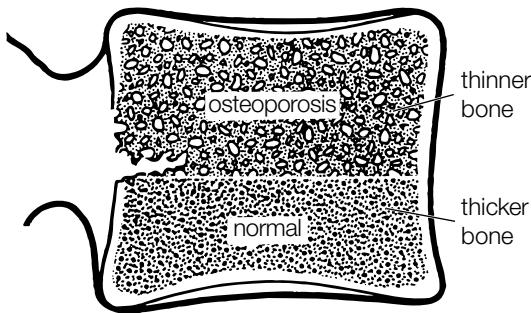
Remember

- Keep your leg elevated as often as possible.
- Keep the leg compressed with a firm bandage, tights or support stockings.
- Avoid further knocks and other injury.

Osteoporosis

What is osteoporosis?

Osteoporosis, which means 'bones with holes', is a condition leading to thinning of bones so that they become weak and brittle due to loss of calcium.



Who gets it?

Osteoporosis is found mainly in middle-aged and elderly women, after the menopause (when the periods cease). It can also affect men.

Why do they get it?

Women at greatest risk are those who:

- are of Caucasian or Asian racial origin
- have a family history of osteoporosis
- are thin and slight
- smoke cigarettes
- drink alcohol
- drink a lot of caffeine drinks (e.g. more than 3 cups of coffee a day)
- get little exercise or physical activity
- have little calcium in their diet
- have low vitamin D levels from lack of exposure to the sun
- have a poor diet in general
- lack hormones due to the menopause, especially early menopause
- have taken cortisone tablets over long periods.

The longer you live, the greater the chance you have of getting osteoporosis.

What is the risk?

The main risk is a bone fracture, especially of the hip, spine or wrist from a fall. Sometimes a bone will collapse or break without injury (e.g. coughing causing a fractured rib). Osteoporotic fractures of the spine can cause gradual development of the 'dowager's hump', an abnormal outward curvature of the upper spine in the back.

How do you know if you have it?

Most women do not know, because thinning of the bones occurs unobtrusively. It is often first noticed when a bone breaks, usually the hip, wrist or vertebrae of the spine. X-rays

may give some idea but they are limited because osteoporosis is not detectable until up to 50% of bone is lost.

The best test, which is done on the spine and neck of the femur bone, is the DEXA bone densitometry scan.

What can you do about it?

- Take regular weight-bearing exercise such as dancing, tennis, jogging and walking (e.g. brisk walking for 30 minutes 5 times a week).
- Stop smoking.
- Cut down on alcohol and caffeine.
- Have a healthy diet.
- Have adequate calcium in your diet: 1000 to 1500 mg per day (1500 mg if postmenopausal). Eat calcium-rich foods such as low-fat calcium-enriched milk (500 mL contains 1000 mg), other low-fat dairy products (e.g. yoghurt or cheese), fish (including tinned fish such as sardines and salmon, with the bones), citrus fruits, sesames and sunflower seeds, almonds, brazil nuts, hazelnuts and tofu.
- Use vitamin D—best got from sunlight on your skin (face and arms) (e.g. 20 minutes exposure a day according to where you live and the seasons). However, avoid exposure to the sun during peak hours (10am–3pm) in summer, which may increase the risk of skin cancer.

Drug treatment

At one time, doctors recommended preventive hormone replacement therapy with oestrogen following the onset of the menopause but this is no longer recommended, due to side effects. However, there are now many other drugs available to improve established osteoporosis. These include:

- bisphosphonates
- selective oestrogen receptor modulators (SERMs)
- strontium ranelate
- tibolone
- calcitriol (a vitamin D derivative).

What can your doctor do?

Your doctor may:

- discuss your diet
- suggest calcium supplements
- review your 'risks' for osteoporosis, and if you are at high risk suggest further tests such as bone density measurement
- prescribe special medication.

Key points

- Osteoporosis is a common condition.
- It starts from a young age but develops faster in middle and older age.
- The main aim is to prevent it from occurring, including preventing falls.

Parkinson's disease

What is Parkinson's disease?

Also known as shaking palsy or *paralysis agitans*, Parkinson's disease is due to an imbalance of chemicals in the nerve cells in the brain that regulate movement. Because these cells do not 'fire' smoothly, various body movements are affected.

How common is the problem?

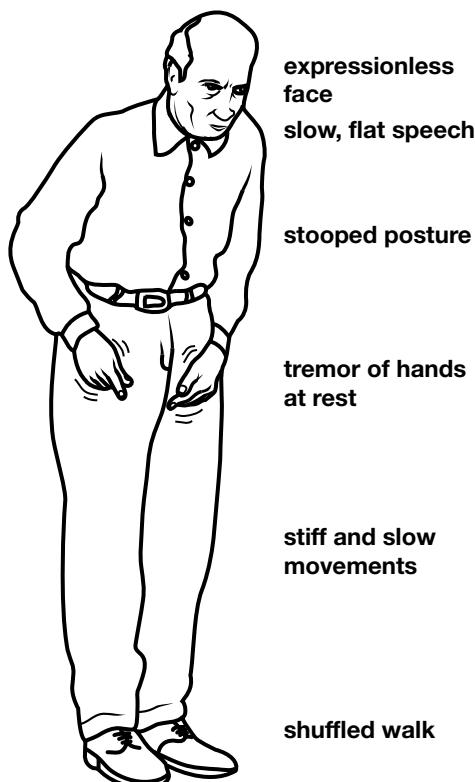
About 1 person in 1000 develops Parkinson's disease, and these are mainly elderly or in late middle age. The exact cause is unknown. It can be caused by some drugs and toxic fumes or substances such as carbon monoxide and lead. There is a hereditary tendency to the disease.

What are the symptoms?

The symptoms are:

- stiff, rigid and slow movements, causing difficulty starting a movement
- a shuffled walk
- an expressionless face
- slow and flat speech
- difficulty writing (small handwriting)
- instability of posture—prone to falls
- a tremor, especially on the hands and arms, with a rubbing together of the thumb and forefinger; the tremor is worse at rest and tends to go away when an action such as picking up a pen or other object is performed.

There is no pain, numbness or pins and needles. Later on falls may be a problem.



Symptoms of Parkinson's disease

What causes the symptoms?

The problem is caused by the lack of a special chemical in the brain called dopamine, which the nerve cells need to 'fire'. It is rather like the chemical in a battery gradually running out so that the battery becomes flat.

It is not caused by a brain tumour or a stroke, but in some cases poor circulation to that part of the brain can be responsible for the problem.

What are the risks?

The disease is not life-threatening because it does not affect nerves that supply the heart or other vital organs, but two common risks are falls and mental depression.

What is the treatment?

Self-help

An important part of managing at home is to keep as active as possible with the help of a caring family, friends and other people. Your mobility can be assisted, for example with walking sticks, bath-rail supports, special banisters where you normally walk, and chairs with high seats and arms.

It is important to have regular exercise and to stick to your everyday routine as actively as possible. Your doctor should see you regularly to assess your progress. Ask about special programs to teach people how to improve their balance and coordination.

Medication

No drug will cure the problem, but there are modern drugs that can do much to relieve symptoms, particularly stiffness and poor mobility. Drugs that lead to higher levels of dopamine in the brain can be prescribed and it is better to begin them early rather than wait until the symptoms are more severe.

The drugs can have side effects such as feeling sick in the stomach (nausea) and a dry mouth, and so your doctor will have to juggle them according to the progress you are making.

What is the outlook?

There are many different grades of severity, but many people have a mild problem and are able to cope, even without the need for dopamine-producing drugs. If the disease gets worse, it is usually only a very slow process; it is rare that a person gets severely disabled and confined to a wheelchair. If you develop Parkinson's disease after the age of 60, you may expect to live out your normal life expectancy.

Retirement planning

Retirement can be a most enjoyable period of the life cycle, one of productivity and self-realisation. However, for many people it can bring considerable unforeseen sadness and stress. This is mainly brought about by inadequate planning and changes of relationships. A person's work in most cases is a means of providing a sense of purpose, personal fulfilment and mateship. Studies show that very few people plan for retirement until just before the time.

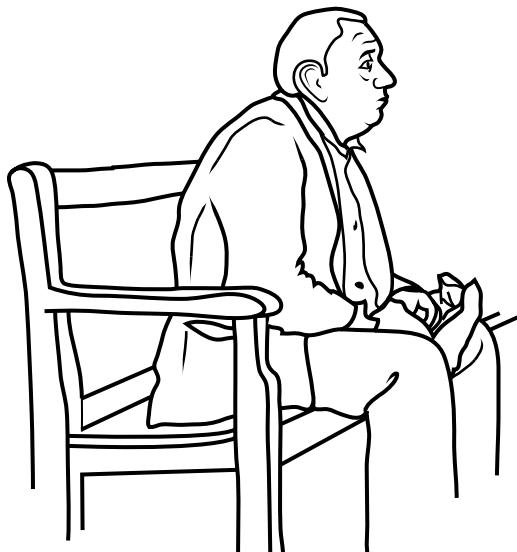
Planning your after-work lifestyle

It is important to think this through and perhaps plan a combination of rest and recreation, travel and activity. It is worth considering that the average person can expect to live to a certain age—currently 84 for women and 79 for men. You should plan with at least this life expectancy in mind.

What are the main problems?

Common problems in retirement are:

- loneliness
- boredom
- financial worries.



Loneliness

Loneliness is a terrible problem; it can lead to depression and a feeling of worthlessness. A common mistake is to sell the family home and move to another location, usually in a small unit. This separation from old friends, neighbours and family can cause much heartache. It often happens to

country people who move to the city. You need your family around you, especially if your spouse dies. You should give consideration to keeping your family home, because it encourages your family to visit you. Children often interpret a move to a small unit as 'don't come and stay with us', although this may not be the intention.

Financial security

You really need sound advice for a secure financial future, including investments. Try to work out your finances 5 years in advance and allow for inflation and home maintenance. If you own your home and car, you have a good basis. You should consider your means of paying for your future health services including health insurance if necessary.

Health

You need good health to enjoy your deserved retirement. Take care not to get into bad eating and exercise habits. Plan a sensible, healthy, balanced diet. Avoid smoking and excessive drinking. Regular and effective exercise is important. Appropriate exercises are walking for 20 to 30 minutes each day, swimming, cycling and golf.

Activities

Retirement gives you the opportunity to devote more time to those interests and hobbies that you already enjoy. It will also give you the chance to pursue new ones. There are many agencies that will provide information on programs for the retired, adult education courses (especially in the arts and crafts) and community work. If your hobby can supplement your income, that is a bonus.

Useful activities include sports such as bowls, golf and tennis, travel, nature walking and voluntary or part-time work. Many retired people get considerable pleasure out of carpentry and woodwork.

Housing

Keep your family home if you can. Carefully weigh up the pros and cons of moving—it can bring much stress, worry and financial problems. As you get older it is most important to have transport, shopping and medical facilities nearby.

Companionship

Good friends and neighbours are excellent 'insurance policies' for a happy retirement. Try to keep in contact with your valued friends. The relationship between husband and wife will be tested, as you have to spend much more time together. Sadly some couples cannot cope with this 'under my heels' syndrome and marital breakdowns do occur. Make sure this does not happen to you.

Stroke

What is a stroke?

A stroke, also called a cerebrovascular accident (CVA) or 'brain attack', occurs when an area of the brain is damaged following interruption to its blood supply. This results in deterioration of the mental and physical functions controlled by that particular area of the brain.

What is the cause?

There are three main causes:

- thrombosis: a clot forming in the artery to the area
- embolus: a small clot from elsewhere blocking the artery
- haemorrhage: bleeding into the brain (unlike the others, where the artery is blocked).

The risk factors for stroke are:

- high blood pressure
- high cholesterol
- diabetes
- smoking
- heart disease
- abnormal rhythms of the heart such as atrial fibrillation (AF)

What are the symptoms?

The symptoms depend on the area of the brain affected and the cause. A haemorrhage usually has a sudden onset and a less favourable outlook. Sometimes a stroke is mild and the effects pass off in a day or so.

Symptoms include:

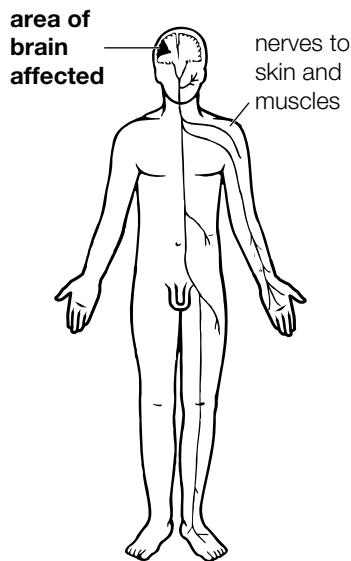
- unconsciousness
- confusion
- loss of power of speech
- loss of movement of part of the body (e.g. on one side of the body)
- double or blurred vision
- difficulty understanding questions
- headache
- dizziness
- difficulty walking or using arms
- numbness or a weak feeling on one side of the body (face, arm or leg).

What is a transient ischaemic attack?

This is a transient loss of function due to a temporary blockage in the artery. It is usually caused by a small embolus and the person recovers in a period ranging from a few minutes to 24 hours (average time 5 minutes). It can be a warning of an impending stroke, and so it needs urgent medical attention.

How common are strokes?

They are very common, especially in people over 65 years and more so in males. In Western countries they are the third most common cause of death and after heart attacks the second most common cause of sudden death. Those at special risk are those with high blood pressure, diabetes or high blood cholesterol and heavy smokers, and those with abnormal heart rhythms such as atrial fibrillation (AF).



An accident to one side of the brain will lead to paralysis of the opposite side of the body

How can strokes be prevented?

The risk factors need to be checked, especially high blood pressure and cholesterol, which must be kept under control. Other things to do are avoid smoking, avoid excessive alcohol intake, eat a low-fat healthy diet, keep to an ideal weight and have regular exercise.

If you have been found to have hardening of the arteries to the brain, you may be advised to have tablets to prevent blood clots (thrombosis) forming. Aspirin can do this, and only a small dose is needed. Special blood-thinning tablets called anticoagulants (commonly warfarin) can be prescribed to help prevent clots.

Surgery

If a person has partially clogged arteries to the brain (the carotids), it may be possible to clean them out, rather like a brush cleaning out a chimney. This operation is called a carotid endarterectomy and is a good option in some patients, especially in those who have had transient ischaemic attacks.

What is the treatment?

It is important to call an ambulance and get to a stroke unit in a hospital as soon as possible. To tell whether a person has had a stroke, follow the FAST rule:

- F: facial weakness (ask the person to smile)
- A: move arms (raise both arms)
- S: speech (speak a simple sentence)
- T: time—act quickly and call an ambulance if the person has trouble with any or all of the above.

The sooner a person with a stroke gets to hospital, the better the outcome. If a person has a stroke caused by a blood clot, and gets to hospital within 3 hours, doctors may give an injection to dissolve the blood clot.

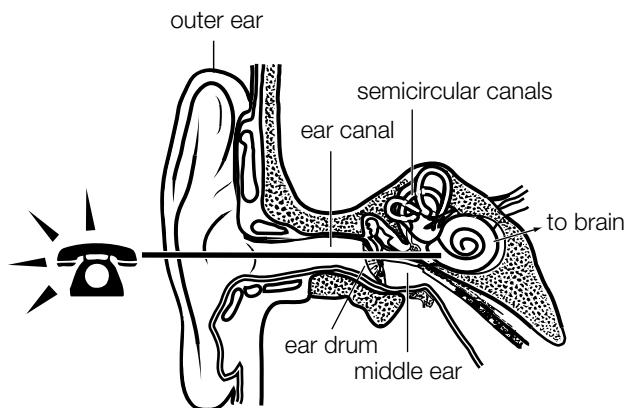
Once a person has stabilised and is recovering, intense rehabilitation to get limbs and speech working again is important. Ideally physiotherapy should be commenced in the first 2 days.

What is tinnitus?

Tinnitus is hearing abnormal noise in the ear or head when there is no sound coming from the outside.

The word tinnitus comes from the Latin *tinnire*, which means 'to ring'.

Although it usually refers to ringing in the ear, tinnitus may include buzzing, roaring, whistling, knocking, hissing, humming or a combination of sounds.



How common is tinnitus?

Although most of us experience tinnitus at some time, especially with a lot of wax blocking an ear, it is only a temporary problem. About 1 in 4 people are bothered by it, but it is a severe problem for 2% of the population.

What causes or aggravates it?

- Ear disorders such as infection
- Excessive noise exposure for a long time
- Wear and tear of the ear with ageing
- Some prescribed drugs
- Stress and fatigue
- Excessive alcohol
- Heavy smoking
- Social drugs, including caffeine and marijuana
- Head injury
- Ménière's syndrome (fluid in the inner ear)

How serious is tinnitus?

Tinnitus in itself is not a serious condition; it does not cause pain or deafness but can be frustrating. Most people with tinnitus have a hearing loss, but there are also many people with normal hearing who have tinnitus. Many people with tinnitus worry that it is a symptom of a brain tumour, a stroke, a nervous disorder or some other serious head problem. However, this is rarely the case.

What are its effects?

The main problem is the psychological effect, as the noise tends to affect one's concentration, ability to think and peace of mind. Stress can aggravate the problem.

It can also be a problem at night, when it is more noticeable and affects the ability to sleep.

What can be done for tinnitus?

Tinnitus is less noticeable when there is background noise, and therefore it is important to 'switch off' from the ear ringing as much as possible and focus on other noise.

The following methods can help one cope with tinnitus.

Stress management and relaxation techniques

Since tinnitus is more noticeable when you are stressed, tired or emotionally upset, learning relaxation or meditation techniques to focus your attention elsewhere may be helpful. Some patients are helped by hypnosis. Your doctor will advise on these methods.

Background sound treatment

A useful treatment, especially for those having trouble getting to sleep, is to have background music playing when retiring at night. Other sounds that are sometimes used include FM static produced by a radio set off the station and environmental sound-masking tapes.

Tinnitus maskers

Some people are helped by wearing a tinnitus masker, which is a device like a hearing aid worn behind the ear. It produces a type of hissing noise that tends to counter-balance the tinnitus noise.

Hearing aids

If a hearing loss accompanies the tinnitus, the use of a hearing aid can mask the tinnitus with amplified sound. This makes it easier to focus on outside sound.

Distracting activities

Some people can cope by diverting their attention away from their tinnitus by keeping themselves busy and undertaking interesting activities that focus their mind elsewhere. Examples include gardening, power walking, music, television, handicrafts, jigsaw puzzles, card playing and discussion groups.

Counselling and support

Most cities have a counselling service for tinnitus sufferers. Ask your doctor about the Australian Tinnitus Association.

Part 2

GENERAL HEALTH



Cardiovascular (including coronary) risk factors

Cardiovascular disease includes coronary heart disease, cerebrovascular disease (causing strokes and transient ischaemic attacks) and peripheral vascular disease. The basic cause of most disorders is a build-up of atheroma (a fatty deposit) within the lining of arteries. These patches of atheroma can trigger a blood clot (thrombosis).

The problem of coronary heart disease

The number one cause of death in modern Western society is coronary heart disease (CHD), whether it be from sudden fatal heart attacks or blocked coronary arteries causing angina and heart failure. CHD is responsible for 1 in 3 deaths in Australia. However, there has been a very pleasing reduction in deaths from coronary heart disease and stroke in the past 20 years because people have made the effort to reduce their risk factors. In spite of this, it is still a major cause of preventable death and we still need to work hard at reducing the risk.

What are the risk factors?

- Hypertension (high blood pressure)
- Smoking
- High cholesterol
- Increasing age
- Diabetes
- Obesity
- Lack of exercise
- Stress
- Alcohol excess
- Family history
- Male gender

These risk factors increase the likelihood of development of hardening of the arteries (or atherosclerosis) due to atheroma; the benefit of reducing them is obvious. The factors are interrelated; for example excessive intake of alcohol will lead to hypertension.

Hypertension

The higher the blood pressure, the greater the risk. Regular checks, say yearly for people over 40 years, are advisable. Doctors recommend that you keep blood pressure at no more than 140 mmHg systolic (upper level) and 90 mmHg diastolic (lower level) for most of the time, though people with risk factors for cardiovascular disease should have blood pressure levels no higher than 130/80 mmHg.

Smoking

Cigarette smoking has been clearly shown to increase the risk of heart disease. The death rate from coronary heart disease is about 70% higher for smokers than for non-smokers and for very heavy smokers the risk is almost 200% higher. The more one smokes, the greater the risk.

It has also been proved that the incidence of heart disease falls in those who have given up smoking.

High cholesterol

It has been proved that high blood cholesterol is related to heart attacks. High cholesterol is caused by a diet high in saturated fats, as compared with polyunsaturated fats. It is

recommended that every effort should be made to keep the total blood cholesterol level as low as possible and preferably below 4.5 mmol/L in adults with no risk factors. Ideally, the LDL (the 'bad' cholesterol) should be below 2.5 mmol/L and the ratio of total cholesterol to HDL ('good' cholesterol) should be below 5:1. This acceptable level can usually be achieved through diet. Saturated fats should be eliminated from the diet or minimised; they are found in regular milk and its products (e.g. cream, butter, cheese); fatty meats; pies and pastries, cakes, biscuits and croissants; cooking fats; most fast foods and potato crisps.

Stress and heart attacks

The stress of our modern lifestyle is regarded as a risk factor. Consider ways to modify your stress factors and seek relaxation programs such as meditation. Stress also causes the liver to produce more cholesterol.

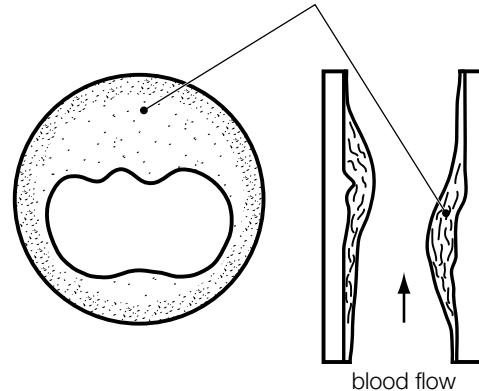
The significance of risk factors

Most of the risk factors are interdependent, and if two or more are present they have a multiplication effect. If only one risk factor is present, there is less cause for concern. Your doctor is the best person to assess the combined risk.

Rules for living

- Do not smoke.
- Drink alcohol in only very small amounts or not at all.
- Keep to an ideal weight and waist size.
- Avoid saturated fats.
- Select preferably low-GI foods.
- Have a low-salt diet.
- Be careful of excess CATS—Caffeine, Alcohol, Tobacco, Sugar.
- Take regular exercise.
- Practise relaxation.

atheroma within wall of artery



Cross-section of artery

Long-section of artery

Cholesterol: how to lower cholesterol

Why bother?

Heart disease is the number one killer in Australia. It is mainly caused by **clogging up** of the arteries by a fatty substance known as atheroma, which comes from having too much 'fat' in the blood. This serious process is called atherosclerosis—the condition that can lead to heart attack or stroke. There are two types of fat that cause damage if their levels are too high—cholesterol and triglyceride. A special blood test taken after fasting for at least 12 hours can tell if one or both of these fats are too high.

Triglyceride

If your triglyceride level is too high, fixing the problem is usually quite straightforward because it is mainly due to being overweight. It is caused by having too many kilojoules in the diet, especially from sugar and other carbohydrates and high-kilojoule drinks (e.g. soft drinks and alcohol, in particular beer). The aim is to get your weight down to an ideal level.

Cholesterol

High cholesterol is a bigger problem, and if your level is too high it is important to reduce it. Cholesterol is a white fatty substance made mainly in the liver by animals, including humans. We get high levels mainly through our diet, by eating saturated fats especially from animal foods (therefore it is a rare problem in vegetarians) and trans-fats found mainly in processed products. Foods to avoid include fatty meats, processed meat, most 'fast foods' especially if they are

deep-fried, snack foods like chips, cakes, biscuits and pastries. There are two main types—HDL 'good' cholesterol and LDL 'bad' cholesterol. We aim to raise HDL and lower LDL. Most people can lower the level through changing their diet. In some people the level is so high that, in addition to the diet, special medicine is necessary to reduce it to the right level. The prescribed drugs are very effective.

Note: Although cholesterol is present in animal food, it has been shown that it is necessary to reduce the amount of all the saturated fats (plant and animal) in our diet and to lose excess weight in order to get our cholesterol down. Foods rich in **starch** (such as bread, rice and pasta) and foods rich in starch and fibre, known as complex carbohydrates, also help.

Golden rules

- Keep to your ideal weight.
- Eat a high-fibre diet.
- Eat fish at least twice a week.
- Beware of 'fast' foods: limit to once a week.
- Avoid deep-fried foods.
- Take regular exercise (e.g. 30 minutes brisk walking daily 5 times a week).
- Always trim fat off meat.
- Avoid biscuits between meals.
- Drink more water rather than soft drinks.
- Do not smoke.
- Limit alcohol intake.
- Limit cheese and ice-cream to twice a week.
- Keep LDL level to less than 2.5 mmol/L.

The low-cholesterol diet

	Foods to avoid	Suitable foods
Eggs	whole eggs, egg yolks	egg whites
Milk	whole milk and its products—butter, cream, cheese, ice-cream, yoghurt, condensed milk, full-fat soy milk	low-fat milk, skim milk and its products—cottage and ricotta cheese, buttermilk, non-fat yoghurt
Organ meats	brains, liver, pâté, liverwurst, kidney, sweetbread	—
Seafood	prawns, squid (calamari), fish roe, caviar, fish 'fingers', canned fish in oil (e.g. sardines)	fresh fish, scallops, oysters, canned fish in water, lobster and crab (small amounts)
Meat	fatty meats—bacon, ham, sausages, salami, canned meats, pressed meats, meat pastes, hamburger mince	rabbit, veal (without fat), lean cuts of beef, lamb and pork (in moderation)
Poultry	duck, goose, skin of chicken and turkey, pressed chicken	chicken (without skin), turkey (lean and without skin), preferably free-range
Bakery food	pies, pasties, pastries, cakes, doughnuts, biscuits, bread with cheese/bacon/ham toppings	bread and crumpets (especially wholemeal), crispbreads, water-biscuits, homemade items (pies etc.) if proper ingredients used
Fast food	fried chicken, chips, fish, dim sims, spring rolls etc., hot-dogs, pizzas, fried rice	—
Nuts	roasted nuts, peanut butter (can have in very small amounts)	pecan nuts, hazelnuts, walnuts, almonds, seeds (in moderation), peanuts, cashews, brazil nuts, macadamias
Fruit and vegetables	—	all types (very important)
Oils and fats	saturated fats—lard, dripping, suet, copha, cooking (hard) margarine, coconut and palm oils, mayonnaise	polyunsaturated fats—some margarines (less than 0.9% trans-fats), some salad dressings (olive oil/French style); vegetable oils—olive, walnut, corn, soya bean, sunflower, safflower, cottonseed (all in moderation)
Cooking methods	frying, roasting in fat	using vegetable oils (as above), baking, boiling, grilling, stewing

Diet guidelines for good health

At times we get confused about what we should or should not eat. The following recommendations come from authorities on nutrition, such as government health departments. These guidelines ensure an adequate intake and balance of all important nutrients—carbohydrates, proteins, fats, fibre, vitamins and minerals.

1. Choose a nutritious diet

Choose from a wide variety of foods to provide meals that are healthier, cheaper, tastier and easier to prepare.

2. Control your weight

Prevent obesity by cutting back fats, sugar and alcohol. Reduce the size of servings (say ‘no’ to seconds) and increase physical activity.

3. Eat less fat

Select fish, **poultry** and **lean meats**; trim excess fat from meat and the skin from poultry. Limit the amount of butter or margarine on vegetables and bread. Use the minimum of cooking fats. Limit the intake of full-cream products, fried foods, fatty takeaway and snack foods.

Use monounsaturated (e.g. olive) oils for cooking rather than polyunsaturated oils.

4. Eat less sugar

Avoid or reduce sweet foods such as **lollies**, sugar, soft drinks, syrups, biscuits and cakes. Reduce the sugar in recipes. Use fresh fruit instead of canned fruit.

Instead, increase your intake of complex carbohydrates that contain **starch** and fibre. Eat more **wholegrain** breads and potatoes prepared without added fat.

5. Eat more breads and cereals, fruit and vegetables

Eat more fruit and vegetables, including dark-green vegetables, potatoes and corn. Choose wholegrain products—cereals, bread, bran, rice and oatmeal. Learn about the value of complex carbohydrates. Base your meals around a variety of fruit and vegetables.

6. Drink less alcohol

Limit alcohol to no more than two standard drinks a day. Drink with smaller sips each time. Reserve alcohol for special occasions and to only one occasion in the day.

7. Use less salt

High sodium intake may raise your blood pressure. Use few salty processed foods, including canned vegetables, meats, chips, crackers, sauces and meat pastes. Read labels on canned and packaged foods for their sodium content. Use little salt for cooking and at the table.

8. Encourage breastfeeding

Breastfeeding gives the best nutritional start to life.

9. Drink more water

Choose water in preference to soft drinks, coffee and tea, cordials and alcohol. Use water filters and purifiers if your water supply is not pure.

Extra tips on diet

- Do not eat animal meat every day, and eat only small portions.
- Limit tea and coffee intake.
- Eliminate or reduce takeaway foods (high in salt and fat). Limit to once a week.
- Eat fish* at least twice a week, preferably daily.
- Fruit is good for you—have it as part of breakfast.
- Limit cheese and ice-cream to twice a week.
- What you usually eat matters most, not what you occasionally eat.

* Avoid regularly eating larger fish known to have high mercury levels (e.g. swordfish, tuna).



Obesity: how to lose weight wisely

Why bother to lose weight?

If you are overweight or obese, you have much to gain by losing weight. You will feel so much better—your self-esteem will return, and it will reduce your risks of heart disease, stroke, diabetes, cancer, gall bladder trouble, **hiatus hernia**, high blood pressure and arthritis, especially of the hips and the knees. Taking your obesity into old age creates many uncomfortable problems.

The two keys to success

- Eat less fattening food (especially fats and alcohol).
- Burn off the kilojoules with exercise.

If we eat more fuel (joules) than we burn, we get fat. Remember that to maintain a steady weight, energy intake must equal energy output.

Fattening foods

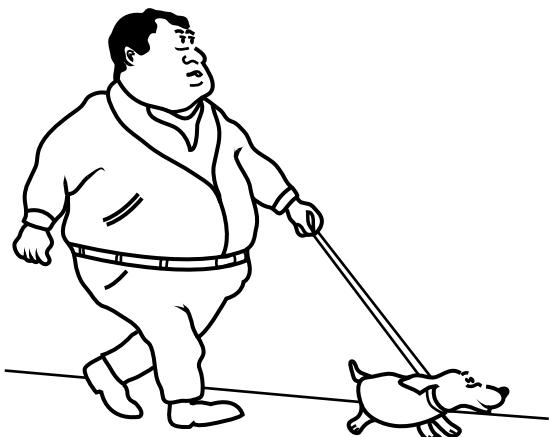
It is essential to cut down on high-kilojoule foods. These include:

- fats (e.g. oils, butter, margarine, peanut butter and some nuts)
- alcohol
- refined carbohydrates (e.g. sugar, cakes, soft drinks, sweets, biscuits, white bread).

A good rule is to avoid 'white food'—those containing lots of refined sugar or flour. Instead go for complex carbohydrates—grains and vegetables.

Physical activity

- A brisk walk for 20 to 30 minutes each day at least 5 times per week is the most practical exercise. Walk at every opportunity.
- Other activities, such as tennis, swimming, golf and cycling, are a bonus. Play a sport that you enjoy.
- Take stairs instead of lifts.



Walk the dog

A plan that works!

Breakfast

- oatmeal (soaked overnight in water); after cooking, add fresh or dried fruit; serve with fat-reduced milk or yoghurt
or
- muesli (homemade or from a health-food store)—medium serve with fat-reduced milk; perhaps add extra fruit (fresh or dried)
- slice of wholemeal toast with a thin scraping of margarine, spread with Vegemite, Marmite or sugar-free marmalade
- fresh orange juice or herbal tea or black tea/coffee

Morning and afternoon tea

- piece of fruit or vegetable (e.g. carrot or celery)
- freshly squeezed juice or chilled water with fresh lemon

Midday meal

- salad sandwich with wholemeal or multigrain bread and a thin scraping of margarine (for variety use egg, salmon, chicken or cheese fillings)
- drink, as for breakfast

Evening meal

- Summer: lean meat cuts (grilled, hot or cold), poultry (skin removed) or fish; fresh garden salad; slices of fresh fruit
- Winter: lean meat cuts (grilled), poultry (skin removed) or fish; plenty of green, red and yellow vegetables and small potatoes; fruit for dessert

Weight-loss tips

- Have sensible goals: do not 'crash' diet, but have a 6-to-12-month plan to achieve your ideal weight.
- Go for natural foods; avoid junk foods.
- Avoid alcohol, sugary soft drinks and high-kilojoule fruit juices.
- Avoid non-hungry eating.
- Strict dieting without exercise fails.
- If you are mildly overweight, eat one-third less than you usually do (only).
- Do not eat biscuits, cakes, buns etc. between meals (preferably not at all).
- Use high-fibre foods to munch on.
- A small treat once a week may add variety.
- Don't skip meals.
- Avoid seconds and do not eat leftovers.
- Eat slowly—spin out your meal and enjoy it.
- Ask your doctor about medicines that claim to remove weight.

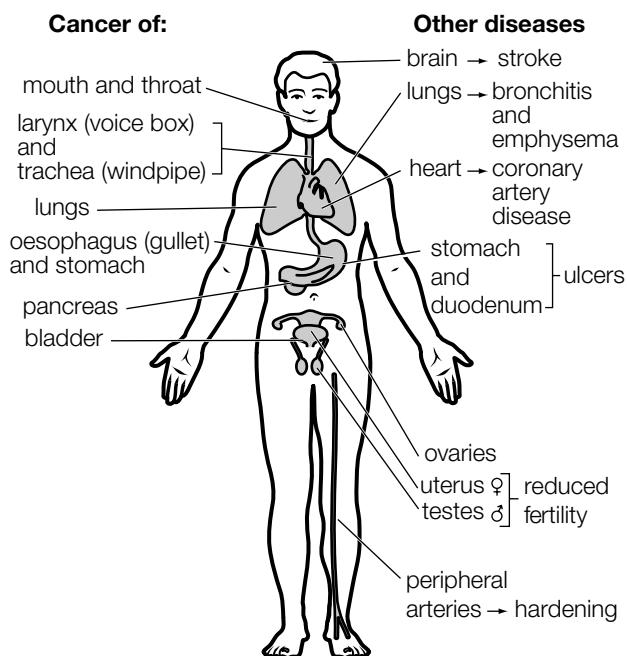
Smoking: quitting

What are the facts on smoking?

Each year over 20 000 Australians die from diseases caused by smoking. Out of every 5 people who smoke 20 or more cigarettes a day, 2 die before the age of 65.

- Cancer: Smoking is the major cause of death from cancer, especially lung cancer (86% caused by smoking).
- Other lung diseases: Smoking causes chronic bronchitis (smoker's cough) and emphysema.
- Hardening of the arteries: Smoking can cause hardening of the arteries of the heart (angina and coronary attacks), brain (strokes) and legs.

Women smokers have problems with pregnancy (including smaller babies), increased chance of infertility, an earlier menopause and an increased risk of osteoporosis.



Harmful effects of smoking

What is in a cigarette?

The most harmful chemicals in cigarettes are tar, nicotine and carbon monoxide. Nicotine causes the addictive effect.

How will it help me if I quit?

The risk of death from heart attacks, lung cancer and other lung diseases will drop dramatically. Many of the bad effects of smoking can be reversed after quitting. Other reported good effects are increased 'wind' on exercise, better senses of taste and smell, improved sexual pleasure and much more pocket-money. It is unnatural to smoke.

How should I quit?

Some people manage to stop completely on their own by going 'cold turkey'. But most people benefit from assistance

in the form of nicotine replacement therapy (NRT) and other medications, or with counselling or therapy (or a combination of these). Gradual reduction (e.g. by 3 or 4 cigarettes a day) is a reasonable method, but it is best if you can stop completely within 2 weeks. It may take several attempts to give up before a person is successful. Perseverance is the key.

What are the unpleasant effects of quitting?

For the first few days it is normal to have the withdrawal effects of feeling restless, irritable, tense, tired and sweaty. You will crave a cigarette, but these feelings are signs of recovery from the addictive effects of nicotine as your body adjusts itself for a return to normal health. After about 10 days, most of these uncomfortable feelings will have disappeared and you will start feeling absolutely marvellous. Ask a smoker who has quit.

What are some good tips for quitting?

- Make a definite date to stop (e.g. during a holiday). After quitting:
- Eat more fruit and vegetables (e.g. munch carrots, celery and dried fruit).
- Foods such as citrus fruit can reduce cravings.
- Chew low-kilojoule gum and suck lozenges.
- Increase your activity (e.g. take regular walks instead of watching TV).
- Avoid smoking situations and seek the company of non-smokers.
- Drink more water and avoid substituting alcohol for cigarettes.
- Be single-minded about not smoking—be determined and strong.
- Take up hobbies that make you forget smoking (e.g. water sports).
- Put aside the money you save and have a special treat. You deserve it!

Where can I get more help?

There are many quitting programs and community groups to help smokers. The Quitline is an excellent resource (phone 134878 and website at www.quitnow.gov.au). Many excellent tapes and booklets are also available. Nicotine replacement therapy (in the form of gum, lozenges or patches) can help reduce the side effects of withdrawal from smoking. For people who don't tolerate these, medications such as buproperine or varenicline are alternatives to nicotine replacement therapy. Counselling and group therapy can also be helpful. Your general practitioner is a good source of advice on how to quit effectively.

A final word

Do not put it off—ask for help now. It is dangerous to keep on smoking.

Bacterial meningitis and meningococcus

What is meningitis?

Meningitis is an inflammation of the meninges, which are the thin membranes that cover the brain and the spinal cord. Infection can be caused by viruses—which is more common—or by bacteria—which is more serious and life-threatening. Bacterial meningitis is basically a childhood infection. Very young children are at the greatest risk, although it can occur in any person.

What is meningococcal meningitis?

A bacterium called *Neisseria meningitidis*, or meningococcus, can cause a particularly deadly infection, especially in children between birth and 5 years of age and in adolescents and young adults between 15 and 24 years. It is spread through close contact with saliva from activities such as kissing and sharing drink bottles, and also by nasal droplets from sneezing. This infection can take the form of meningitis or septicaemia (severe infection of circulating blood), or both simultaneously. The affected person rapidly becomes sick and may develop a rash. The red rash can be misleading because it looks like any heat rash at first but then the deadly sign of purpura (bleeding into the skin) develops. It does not blanch (turn white) on finger pressure. Early diagnosis and treatment with antibiotics is critical. Untreated cases may be fatal or result in permanent brain damage.

What are frequent symptoms and signs?

- Fever
- Headache
- Nausea and vomiting
- Pale skin
- Skin rash
- Weakness/tiredness
- Increasing irritability with high-pitched cry
- Drowsiness
- Neck stiffness
- Sensitivity to light
- Altered state of consciousness (e.g. confusion or disorientation)

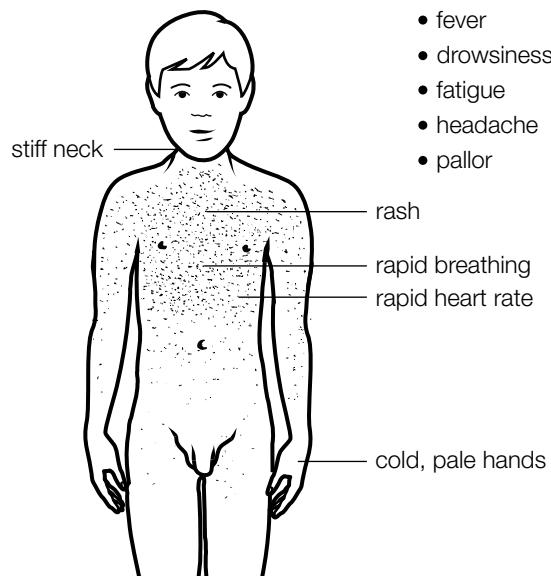
As a general rule the illness seems like the flu at first and it can be difficult for doctors to diagnose correctly in the early stages.

In infants the signs of meningitis may not be so obvious, but neck stiffness, vomiting and headache are more noticeable in children over 3 years of age. These symptoms may not be obvious if the child is on antibiotics. To arrive at the correct diagnosis, doctors usually need to do a lumbar puncture (sampling of fluid from the spinal column with a needle), blood tests or brain scans.

When is urgent attention necessary?

If your child develops any of the following 'red flag' signs, take the child immediately to your doctor or hospital emergency department:

- becomes 'flat' quite rapidly
- cold, pale skin especially of the limbs
- change in state of consciousness
- drowsiness, confusion or delirium



Signs of meningococcal meningitis

- rapid heart rate
- rapid, difficult or noisy breathing
- convulsion
- red rash, especially if it looks like flecks of blood.

Doctors prefer to treat people early in the illness, rather than later when the child will be very sick and treatment is more difficult.

What is the treatment?

Patients will be admitted to hospital initially to confirm the diagnosis and to identify the causative bug. Treatment is by large doses of antibiotics, which are usually fed directly into a vein by means of an intravenous drip. This procedure may be necessary for up to 2 weeks. The patient will require strict bed rest, probably in a darkened room, plenty of fluids, and analgesics for any pain. Barrier nursing to prevent spread of infection will be required.

How is it prevented?

Seek medical care for any persistent infection especially in the upper respiratory tract. Avoid contact with a person who has meningitis. Oral antibiotics are given for the following contacts of a person with meningococcal disease. Those who:

- live in the same household and share meals and living space
- have kissed the patient in the previous 10 days or shared saliva (e.g. drink bottles, cigarettes)
- have attended the same day care centre, kindergarten, school or university class, especially sharing toys.

A meningococcal vaccine is available but it may not cover all strains. Check with your doctor, who can advise you about immunisation. Immunisation is recommended against *Haemophilus* and *Pneumococcus* for infants and the elderly, as these are other causes of bacterial meningitis.

Bed bug bites

What are bed bugs?

Bed bugs are small, wingless blood-sucking insects about 4 to 5 mm long that belong to the arthropod family of insects and are notorious for infesting the skin of humans. The family also includes the louse and the scabies mite. The two main species of bed bug that bite humans are the common bed bug, *Cimex lectularius*, and the tropical bed bug, *Cimex hemipterus*.

They are roughly oval in shape and flattened; being thin, they can hide easily in narrow cracks and crevices and are therefore very difficult to detect. They also move very quickly. Bed bugs, as the name indicates, are attracted to beds and bedding, including sleeping bags, where they seek human blood at night. They are rust brown in colour and change to a darker red brown following a meal of blood.

Where are bed bugs found?

In the past bed bug infestation was a frequent problem, especially in unhygienic living conditions including low-standard accommodation facilities. However, like lice infestation, bed bugs can affect people from all walks of life if they are exposed to the bugs. Nowadays it is a major problem related to international travel. The bugs travel in baggage and often hide in luggage, clothing, bedding (especially in the seams of mattresses), carpet and furniture. They are most often found in dwellings with a high occupancy turnover such as hotels, motels, hostels, shelters and backpacker accommodation.

What is the life cycle of bed bugs?

There are five 'baby' stages known as nymphs before the bug reaches adulthood. The nymph development takes 6 to 8 weeks and each stage requires at least one meal of blood to moult to the next stage. The adults can live on average for 6 to 12 months. The female lays eggs in hidden areas and they hatch in about 10 days. The bugs, which have special adapted mouthparts for piercing skin and sucking blood, seek out humans at night for their meal and then withdraw to their hiding places. They are attracted to heat and carbon dioxide, not dirt.

What are the typical symptoms of bed bug bites?

Bed bugs commonly target the shoulders and arms but will bite anywhere on the body. The bites are often seen on the neck, shoulders, arms, torso and legs. The bite is painless but the features of the bites include:

- itchiness, which can be extreme
- large weals, which reduce to a red mark, then gradually fade
- bites in orderly rows of three or more (along superficial veins)
- redness of skin
- localised swelling
- development of blisters.

The bites may be worse if there is an allergic reaction to the bug and therefore the effect varies between individuals.

The diagnosis is confirmed by identifying specimens collected from the infested residence. Look for reddish spots on mattresses.

How are the bites treated?

Helpful suggestions include:

- cleaning the bite marks with antiseptic soap
- resisting the urge to scratch
- applying an anti-itch preparation such as:
 - calamine lotion
 - an anaesthetic cream, or
 - a cortisone cream
- applying an ice pack often to relieve swelling
- taking pain-killing or antihistamine medication if necessary.

How is a bed bug infestation controlled?

The following can be attempted.

- Thoroughly clean, wash and vacuum all surfaces and bedding.
- Wash bedding and affected clothing in hot water and dry on the hot cycle of the clothes dryer.
- Steam clean carpets.
- Vacuum mattresses, seal in dark plastic and leave outside in the hot sun for as long as possible.
- Spray a surface insecticide on common hiding spots such as in wall cracks and crevices, skirting boards, between the cracks of wooden floors, carpet and breaks in wallpaper (do not treat bedding with insecticide).

Pest control professional

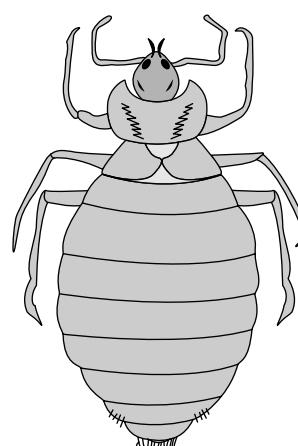
It is worth hiring the services of a licensed pest controller experienced in treating these insects.

Prevention of infestation

This is difficult but can be helped by having high standards of housekeeping and home maintenance. Be careful of bringing luggage and second-hand items such as bedding and furniture into the home.

Important points

- Bed bugs rarely transmit disease.
- They are commonly found on beds or mattresses.
- They hide by day and become active at night.
- Bites are in a line of about three or more.
- Bites are large, red and itchy weals.



The bed bug (under a microscope)

Bronchitis: acute bronchitis

What is bronchitis?

Bronchitis is inflammation of the mucous lining of the bronchial tree (air passages) of the lungs. The inflammation affects the trachea, the large bronchial tubes (called bronchi) and the smaller bronchial tubes (called bronchioles).

Acute bronchitis refers to the sudden onset of this inflammation, while the term chronic bronchitis refers to the more serious long-term condition that follows repeated attacks of acute bronchitis.

What is the cause?

Acute bronchitis is almost always caused by one of the many common respiratory viruses. Most cases begin with an upper respiratory infection such as the common cold. The infection spreads from the nose and throat down the trachea into the bronchial tubes.

Another cause is inflammation from breathing air that contains airborne pollutants such as chemical fumes, dust and smoke, which irritate the bronchial tree.

What are the symptoms?

The main symptom is an irritating cough that produces little or no sputum initially but may later bring up greyish or yellowish sputum called phlegm.

Other symptoms include:

- wheezing
- breathlessness
- fever
- discomfort (a feeling of pressure) behind the sternum, made worse by coughing

How common is acute bronchitis and who gets it?

An occasional attack of acute bronchitis is very common in those who live in a polluted, cold or damp environment, and who smoke cigarettes. It is relatively rare in fit, healthy people.

The risk of getting an attack increases with:

- smoking
- cold or humid weather
- areas of high atmospheric pollution
- chronic obstructive pulmonary disease
- congested lungs from heart failure
- recent illness
- certain ages—very young and old.

What is the outcome?

At least 85% of healthy people who get an episode of acute bronchitis find it improves by itself without treatment in about 4 to 8 days.

Sometimes, especially in those in the risk categories mentioned, the infection can be complicated by an additional

bacterial infection in the lungs. These patients may get worse, with increasingly severe symptoms, and cannot shake off the infection.

What are the risks?

There is usually no significant risk to the lungs if a healthy non-smoker has a single attack of acute bronchitis. However, it can be serious, especially in people who are weak or ill. In these people, complications such as chronic (persistent) bronchitis or pneumonia can develop.

Recurrent episodes of bronchitis are a concern in smokers and those with an existing lung disorder such as pulmonary fibrosis. This is dangerous because it can eventually lead to chronic obstructive pulmonary disease.

What is the treatment?

The issue of prescribing antibiotics

Antibiotics are not needed for acute bronchitis, especially if you are in good health, because it is a viral infection that runs a natural course of recovery without specific treatment. Antibiotics are reserved for those patients whose illness may be complicated by a bacterial infection.

General self-help measures

- Rest at home, not necessarily in bed.
- A warm, well-ventilated, smoke-free room is best.
- Take aspirin or paracetamol (preferable) for fever or chest discomfort.
- Drink plenty of fluids.
- Take any over-the-counter cough medicine that works for you for a non-productive cough (without sputum).
- A heat pack or hot-water bottle placed on the chest may relieve discomfort.
- Some people find that steam inhalations using a mentholated preparation in very hot water can clear the nasal and bronchial passages.

In some cases your doctor may prescribe a bronchodilator drug administered by aerosol inhalation to relieve any wheezing.

Note

If you smoke you should try to stop it during the acute attack and not resume smoking afterwards.

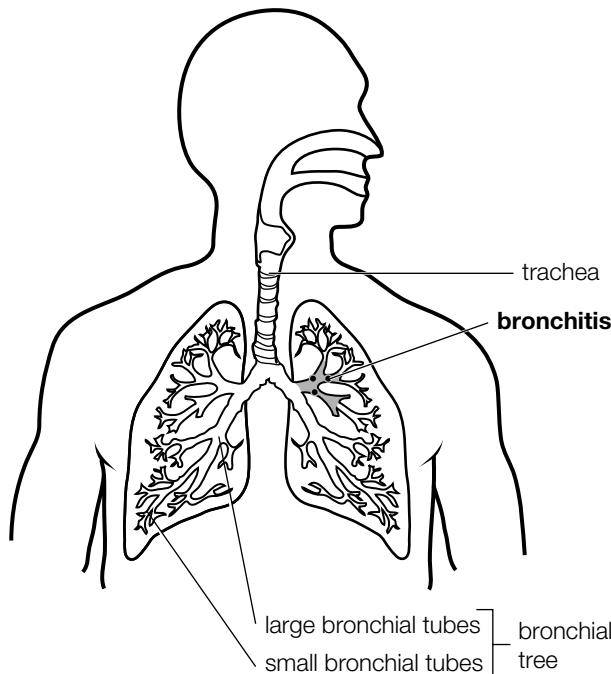
When to seek medical help

- Increased shortness of breath
- High fever and chills
- Chest pain
- Discoloured and/or bloody sputum
- Vomiting
- Other serious symptoms

Bronchitis: chronic bronchitis

What is chronic bronchitis?

It is a persisting inflammation of the bronchial tree (air passages) of the lungs. It is a potentially dangerous problem because it starts so quietly that many people do not realise that they have it. Repeated irritation thickens and damages the delicate lining of these important tubes. This leads to lots of mucus and thus narrowing of the tubes.



What are the symptoms?

The main symptom is a morning cough with sputum (phlegm). Smokers may consider this to be a normal smoker's cough, but there is nothing normal about it. As time goes by, this productive cough increases.

Later on, wheezing and breathlessness become a problem. If you are breathless when you exert yourself, you probably have significant lung damage.

What are the causes?

Smoking is the main cause of chronic bronchitis.

People who work in dusty atmospheres are also at risk. Air pollution is also a factor.

At first the bronchitis gets worse with bad colds or influenza, but eventually even a mild cold can bring on a nasty flare-up. Colds or other infections can cause deterioration, especially in winter. However, chronic bronchitis is not caused by chronic infection. It is usually caused by chronic irritation from smoke.

What are the risks?

Once bronchitis is chronic, a vicious cycle is established so that increasing infections and lung damage occur.

The end result is severe permanent lung damage called chronic obstructive pulmonary disease (COPD) or emphysema, which may lead to heart failure.

How common is the problem?

In Australia about 4500 people die of chronic bronchitis each year.

What is the treatment?

Self-help

If you smoke, you should stop. This is the vital first step—it will stop further damage. The lungs may return to normal. Avoid smoke-filled rooms.

If you work in a polluted or dusty atmosphere, it would be wise to change your job. A warm, dry climate is preferable to a cold, damp place: it may make you feel more comfortable and may make you less susceptible to winter colds and flu.

Avoid close contact with people with colds or influenza, since any viral respiratory infection is a problem to your lungs.

Medical help

To help guide treatment, doctors will want to know the extent of any damage to the lungs. This is done with a special test called spirometry, which measures how effectively the lungs are working. Doctors may prescribe medication via aerosol inhaler, such as corticosteroids or bronchodilators if you have wheezing and breathlessness, and/or if these tests show that your breathing capacity is reduced. Doctors may also prescribe antibiotics if there is a bacterial infection. (Worsening cough, with sputum changing to a yellow or green colour, is a sign that you may be developing a bacterial infection.) People with chronic bronchitis may develop serious chest infections such as pneumonia and may need admission to hospital to manage their illness.

Doctors may also recommend a pneumococcus vaccination and annual anti-influenza vaccinations. You may also benefit from a special program of exercises called pulmonary rehabilitation, which helps relieve some of the breathlessness and allows you to be more active.

Your doctor can also help you with strategies to stop smoking. STOP NOW—before it is too late.

Chlamydial urethritis

What is Chlamydia?

Chlamydia is a type of bacterium, and one of its varieties, *Chlamydia trachomatis*, is the most common sexually transmissible infection (STI) in the world. It is considerably more common than gonorrhoea.

What are the symptoms?

The symptoms usually appear about 2 weeks after sex with an infected person, although the incubation period can be as long as 3 weeks and as short as 5 to 10 days.

In men

The main symptoms (if present) are:

- a burning sensation when passing urine
- a discharge (clear, white or yellow) from the penis.

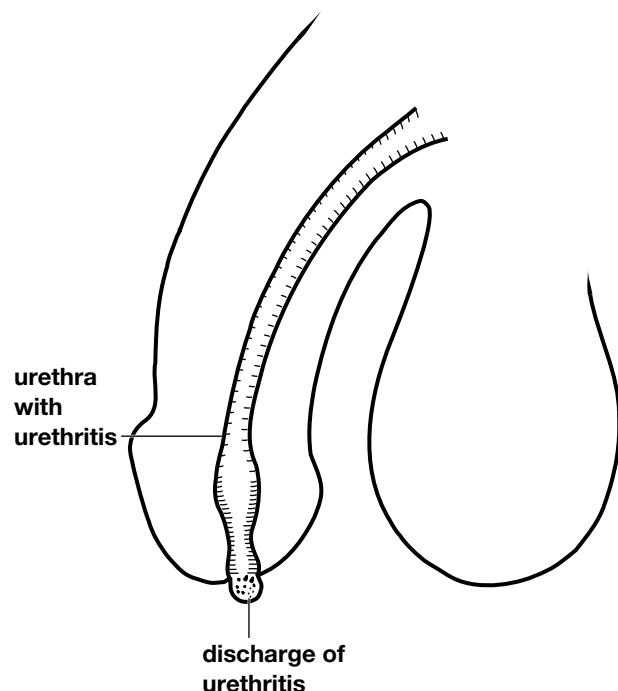
Sometimes there is no discharge, just pain. Most often the symptoms are trivial. About 40% of men with chlamydial urethritis may have no symptoms.

The first noticeable symptom is a slight tingling or burning at the tip of the penis, usually first thing in the morning. The pain sometimes becomes quite severe. The discharge soon follows. It is usually clear at first, but if untreated can become heavier and yellowish. The infection can spread to the prostate gland and testicles.

In some, the only symptoms are spots on the underpants or dampness under the foreskin.

In women

In women, chlamydial urethritis usually causes no symptoms at all (this applies to about 70%) but may cause vaginal discharge. Some may notice burning on urination and some pain during sex.



Chlamydial urethritis in males

If untreated, as is often the case, it can infect the fallopian tubes. This is the most common cause of pelvic

inflammatory disease, which can result in infertility. Because it causes no obvious symptoms, chlamydia is known as a 'silent' epidemic.

How is it diagnosed?

Chlamydial urethritis used to be diagnosed by taking special swabs from the affected areas: from the urethra of the male penis and the cervix and urethra in females.

A better method these days is a PCR test, done on a specimen of urine. This urine screening test is now recommended annually for all sexually active males and females under 25 years of age.

How is it caught and spread?

It is transmitted from one person to another during sexual intercourse. Men can pick it up through vaginal sex (often the woman carries the infection without knowing) or, less commonly, through anal or oral sex with persons of either sex.

What is the treatment?

Chlamydial urethritis is treated with a course of antibiotics, usually azithromycin as a single dose or doxycycline for 7 days. It usually responds very well to treatment, but can be slow to respond in some people and may recur in some others. About 1 in 5 patients will need more than 1 course.

It is the male who usually notices symptoms and comes for treatment. However, it is important that the sexual partner or partners are tested even if they have no symptoms. Sexual intercourse must be avoided until the infection is cleared up in both partners.

How is it prevented?

Using condoms for vaginal or anal sex provides some protection; they should be used with any new partner.

Important points

- Chlamydial urethritis is a common STI.
- It sometimes causes symptoms in men.
- There may be no symptoms in women.
- It can cause infertility in women (and less commonly in men).
- It is readily treated by antibiotics.
- Treatment may be by a single dose only but repeat courses may be needed.
- All sexual partners need to be treated.
- Do not have sex until at least one week after the infection is cleared (both partners).
- A repeat test for chlamydia is recommended in three months to check for possible reinfection.
- It is the affected person's responsibility to inform any sex partner(s) that they have had for the previous 6 months prior to infection that they have had chlamydial urethritis.
- Partners need to be informed, tested and treated.
- Condoms provide some protection.

Common cold

What is the common cold?

The common cold is an infection of the upper respiratory passages, especially the nose and throat. It is also referred to as an upper respiratory tract infection (URTI). It is caused by any of several types of viruses. It is quite different from influenza (the flu), which is caused by more serious viruses.

It is one of the most common causes of illness in children and adults.

What are the symptoms?

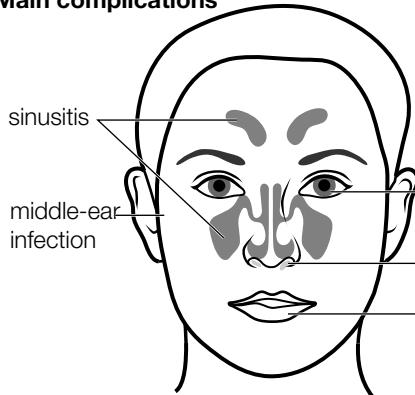
The usual symptoms are:

- runny or stuffy nose
- sore throat
- sneezing
- sore eyes
- feeling generally unwell
- slight fever.

Other possible symptoms are:

- headaches
- hoarseness
- high fever, with general aches and pains
- coughing.

Main complications



Main symptoms

headache,
feeling unwell

sore eyes
runny nose
sore throat,
cough

The main symptoms and complications of the common cold

How is it caught?

If you have a cold, you must have breathed in the virus, which is carried in the air after being coughed or sneezed out by another person with a cold.

What is the treatment?

There is no cure for the common cold. Antibiotics are of no use for viral infections and are only useful for certain

complications. Fortunately, the body's immune system eventually is able to fight the virus by making antibodies. This takes several days. There are several things you can do to feel more comfortable, and to help your body's immune system relieve it more quickly:

- Rest. It is important to have plenty of sleep and rest when you have a cold. Physical activity puts extra demands on the immune system.
- Drink lots of fluids—at least 2 litres a day.
- Analgesics such as paracetamol and aspirin have several useful effects: they control fever and inflammation, and they are effective painkillers. The adult dose of paracetamol or aspirin is 2 tablets every 4 hours (up to a maximum of 8 per day). Do NOT give aspirin to children (avoid it under 16 years).
- A blocked nose can be considerably helped by inhaling steam. One way is to put boiled water into a basin with menthol or friar's balsam, then put a towel over your head and breathe the steam in through your nose and out through your mouth. Children should not try this, however, because of the risk of burns.
- Usually, coughing is to clear away unwanted material. If you have a dry cough, however, and it is very distressing, you may suppress it with a cough mixture. Ask your pharmacist or doctor about this.
- Gargling aspirin in water or lemon juice can soothe a sore throat in adults.
- Some people claim that taking large doses of vitamin C helps them recover more quickly from a cold. An average dose is 1 to 2 grams a day.

Your cold may clear up in a few days, but can last up to 10 days. Sometimes you can get a bacterial complication, which may require antibiotics. However, antibiotics are not prescribed as a rule because they are not necessary. Viruses are not destroyed by the commonly prescribed antibiotics and there is no evidence that giving them leads to a quicker recovery. If you get any of the following, you should see the doctor:

- a sore ear
- chest pain or difficulty in breathing
- a lot of green mucus from your chest or nose
- a sore throat without other symptoms
- a high fever not responsive to paracetamol.

How can it be prevented?

It is important to consider whether you have a reason for getting this cold. Regular exercise, a balanced diet and adequate sleep are important to keep your immune system in tiptop shape.

Ear infection (otitis media)

What is otitis media?

Otitis media is an infection of the middle ear, which consists of the ear drum and the small cavity behind it, which is normally filled with air. The cavity is connected to the back of the nose by the Eustachian tube.

What is the cause of otitis media?

It usually develops suddenly in association with an infection of the nose and throat region such as the common cold. It is then called acute otitis media. The infection may be either due to viruses or bacteria, which enter the middle-ear cavity and infect the mucus that collects because of swollen and blocked air passages. Sometimes the infection can enter through a ruptured ear drum. Pus will form in the middle ear if the infection is bacterial.

Who gets acute otitis media?

Any person of any age group can get it but it is most common in children. Almost 1 in 30 people get it.

What are the symptoms?

Some people, particularly children, can feel very sick with fever, irritability, headache, nausea and (sometimes) vomiting. Children tend to pull at their ears. Common symptoms include:

- fullness in the ear/blocked ear
- earache (absent in some)
- pain which may be stabbing and severe
- dulled hearing for a few days
- discharge from ear—if ear drum perforates (with relief of pain).

Your doctor will examine the ear, particularly the drum, using an otoscope to assess the nature of the infection.

What are the risks (complications)?

If the infection is viral the risks are minimal. Complications are usually associated with delayed treatment of bacterial infection.

- Acute mastoiditis—spread of infection to the mastoid bone's air cells
- Chronic otitis media—lingering infection
- Serous otitis media (glue ear)—in children, causing an effusion from the ear
- Perforated ear drum
- Hearing loss

What is the treatment?

Some bouts of otitis media may settle well within 2 to 3 days with simple treatment measures such as treating

an associated cold with decongestants, inhalations and/or antihistamines.

General measures

- Analgesics to relieve pain
- Adequate rest in a warm room
- Decongestant medication to relieve upper respiratory congestion
- Topical nasal decongestants for a few days only if nasal blockage

Children are usually treated differently from adults. With appropriate treatment most children with acute otitis media are much improved within 48 hours.

Analgesics

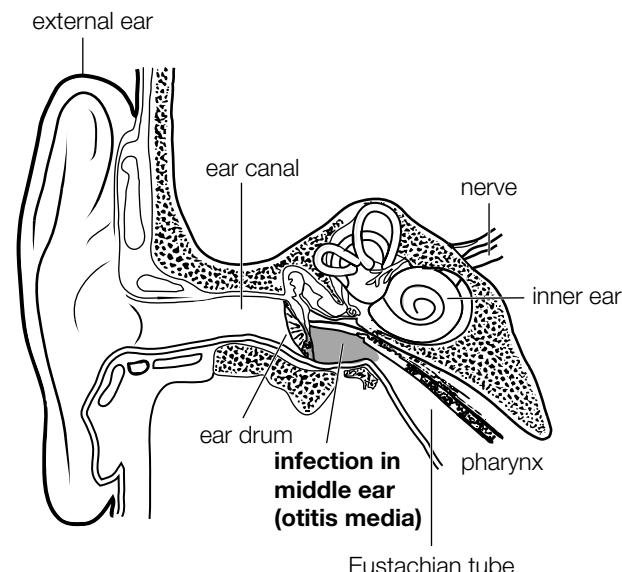
Children should be given regular doses of paracetamol. Adults should take paracetamol, aspirin or ibuprofen for pain.

Antibiotics

Doctors prefer to avoid the use of antibiotics and adopt a 'wait-and-see' approach for the first 48 hours while analgesics and decongestants are used. If required, antibiotics are then given for 5 to 7 days or until all signs of infection have gone.

Follow-up

In cases where there are frequent episodes of ear infection, or if the infection is lingering or chronic, doctors will assess the ear, including the ear drum. Hearing is tested, preferably with an audiometer.



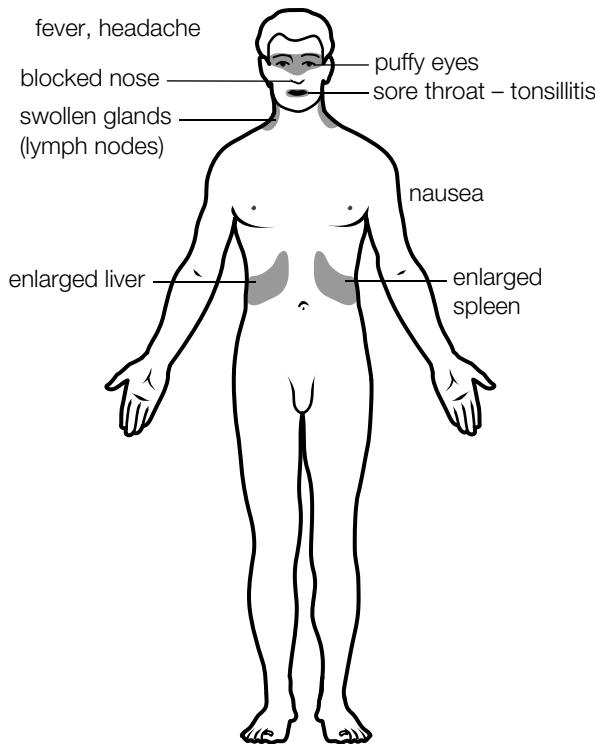
Glandular fever

What is glandular fever?

Glandular fever (properly known as Epstein–Barr mononucleosis) is a viral infection that causes an illness similar to influenza. It is sometimes called ‘the kissing disease’ because it was observed to be passed from one person to another through the mouth. It is also transmitted by coughing and sharing food. The virus spreads through the bloodstream and the lymphatic system, causing the spleen, liver and lymph glands to swell as well as causing a fever (hence the term ‘glandular fever’).

What are the symptoms?

The symptoms are similar to those of the flu: fever, headache, blocked nose, nausea, mouth breathing, sore throat (you may have tonsillitis) and a general sense of feeling ‘out of sorts’. The patient may be aware of having swollen, tender glands (lymph nodes) in the neck, armpits and groin. Less common symptoms include a rash and jaundice.



Symptoms and signs of glandular fever

How is it diagnosed?

The best way to diagnose the illness is for a blood test to be done. The blood smear also shows abnormal cells (called monocytes) under the microscope, hence the name mononucleosis.

How long does it last?

The major symptoms usually disappear within 2 or 3 weeks, but for a further period of at least 2 weeks you may feel weak, lacking in energy and depressed. Occasionally the lethargy can last for many months, suggesting that chronic glandular fever is one of the causes of chronic fatigue syndrome.

How common is the problem?

It is probably more common than realised, because many cases are mild and pass unnoticed or are simply mistaken for a mild attack of influenza. This applies particularly to children. Children and young adults are the most likely to catch the virus, but the disease is usually seen in 15 to 25 year olds. Most people are probably affected by glandular fever at some stage in their life.

What are the risks?

It is not a dangerous disease, but can make you feel extremely sick if it causes hepatitis. It can lead to chronic fatigue for several months. You may have a relapse during the course of the first year after contracting it. However, it eventually settles completely and the body returns to normal.

What is the treatment?

Because glandular fever is a viral infection, antibiotics will not help. The illness must simply run its course.

Do:

- take paracetamol (in modest doses) to relieve discomfort or pain, but not if the liver is affected
- rest (the best treatment), preferably at home and indoors
- drink plenty of fluids such as water and fruit juices
- gargle soluble aspirin or 30% glucose to soothe the throat
- disinfect articles soiled with nose and throat discharges, such as handkerchiefs.

Don't:

- drink alcohol or eat fatty foods
- push yourself to perform tasks
- attempt to return to your normal daily routine until advised to do so by your doctor (about 4 weeks after the illness starts)
- participate in contact sports until at least 4–6 weeks after complete recovery (an abdominal injury may cause the swollen spleen to rupture)
- share drinking containers.

Finally, it is common to feel depressed during the illness and in the recovery phase because you may feel tired and lethargic. Report any such problems to your doctor.

Gonorrhoea

What is gonorrhoea?

Gonorrhoea (also known as 'the clap') is a sexually transmitted infection (STI) caused by the bacterium *Neisseria gonorrhoeae*. It commonly affects the urethra, especially in men, and other genital areas but may also develop in the anus or throat, depending on the sexual activity.

What are the symptoms?

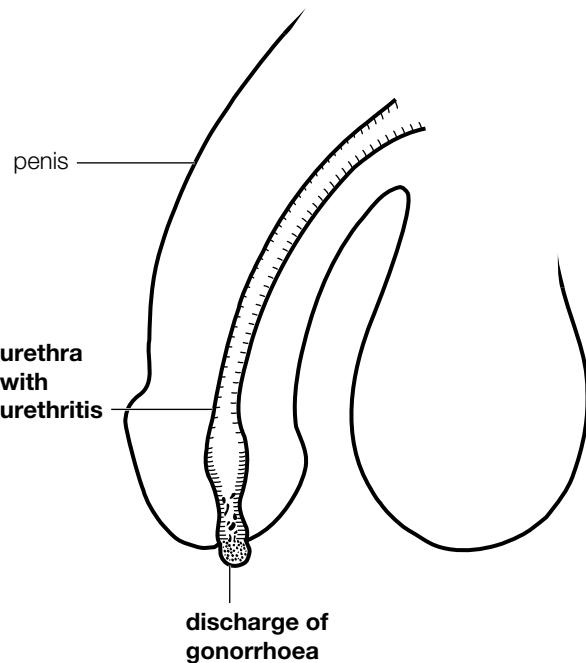
The symptoms usually appear about 2 to 10 days after vaginal, anal or oral sex, but the incubation period can be as long as 3 weeks.

In men

The main symptoms (due to urethritis) are:

- a burning sensation on passing urine
- a pus-like (white or yellow) discharge or leak.

The first noticeable symptom is a slight discomfort on passing urine, which can later become very painful, 'like passing razor blades', if it is not treated. A discharge of creamy pus from the tip of the penis follows. Sometimes there is no discharge, just pain, and sometimes there are no symptoms at all.



Gonorrhoea in men

In women

In women gonorrhoea often causes no symptoms but can produce vaginal discharge or pain on passing urine. If it produces pelvic inflammatory disease (PID) it can cause:

- pain and tenderness deep in the pelvis
- lower abdominal pain and tenderness

- fever, an unwell feeling and painful periods
- pain on intercourse.

In both sexes

Gonorrhoea of the anus and throat may have no symptoms or soreness. There may be a discharge (a feeling of dampness) around the anus.

Gonorrhoea is diagnosed by taking swabs from the infected areas or testing the first passed specimen of urine.

How is gonorrhoea spread?

It is spread through vaginal and anal intercourse and oral sex, whether homosexual or heterosexual, where one partner is already infected.

What are the risks?

- It can cause PID in women, sometimes leading to infertility.
- It can cause infection in the joints.
- In men it can infect the testicles and also may cause a urethral stricture (narrowing of the urethra).

What is the treatment?

You must see your doctor or go to an STI clinic. Gonorrhoea is treated with a single dose or course of antibiotics (usually by injection, but sometimes by tablets or capsules, depending on where you picked up the infection and on the test results). It is usually cured in about 2 weeks.

Sexual partners should be tested, even if they have no symptoms, and even if a check-up has failed to detect the infection.

Sexual intercourse must be avoided until the infection has cleared up (both you and your partner).

How is gonorrhoea prevented?

Using condoms for vaginal, anal and oral sex provides good protection. Sexually active men and women (especially those at higher risk, e.g. those with multiple partners) should have regular checks (at least annually).

Important points

- Gonorrhoea may cause no symptoms, especially in women.
- It can cause infertility in women (and less commonly in men).
- It can be diagnosed by a simple urine test.
- It is readily treated by antibiotics.
- All sexual partners need to be informed, tested and treated.
- Sexual intercourse should be avoided until the infection has cleared.
- Condoms provide protection.

Hand, foot and mouth disease

What is hand, foot and mouth disease?

Hand, foot and mouth disease (HFMD) is a common infection that affects young children and causes a specific blistering rash of the hands, feet and mouth. It is usually caused by the Coxsackie A virus. It has a worldwide distribution with a tendency to occur in small epidemics. HFMD is commonly referred to as 'crèche disease' or 'childcare centre disease'.

How common is HFMD?

It is very common in children and occurs frequently among groups of children in childcare centres, kindergartens and schools. The incidence is greatest in summer and autumn. Although it usually occurs in children under 10 years of age, especially from 6 months to 3 years, it can also occur in older children and adults, particularly younger adults.

What are the symptoms?

There is a prodromal (early stage) illness, which is present before the rash appears and includes:

- malaise (i.e. feeling 'out of sorts')
- fever, usually of sudden onset
- sore throat
- poor appetite (anorexia)
- headache
- irritability, especially in small children
- abdominal pain (in some).

The rash appears after 1 or 2 days, and consists of the following:

- small red spots that progress to blisters and then become tender ulcers
- blisters (vesicles) in the gums of the mouth and around the mouth
- red lumps and blisters on the fingers and palms of the hand and on the toes and soles of the feet
- blisters may also appear on the limbs, the buttocks and also on the genitals.

Note:

- The illness usually lasts for 7 to 10 days.
- The diagnosis is made on the clinical appearance—special tests are usually unnecessary.
- The spots are similar to those of chickenpox but are not itchy.
- The ulcers in the mouth are painful.
- HFMD is NOT related to foot and mouth disease of animals.

How is HFMD spread?

It is transmitted by direct contact from person to person or by droplets spread in the air. The virus is passed out in the infected person's faeces and saliva for several weeks. The incubation period is 3 to 6 days and children are very infectious until the blisters have disappeared.

Is HFMD serious?

Usually not. Most children have a mild illness that is short-lived and they recover in 4 to 6 days. The sore mouth can make the child miserable for a few days. The skin blisters and

ulcers heal without scarring. If a pregnant woman catches it, there is no risk to the mother, but there is a small risk to the fetus, especially in late pregnancy. The fetus may develop complications.

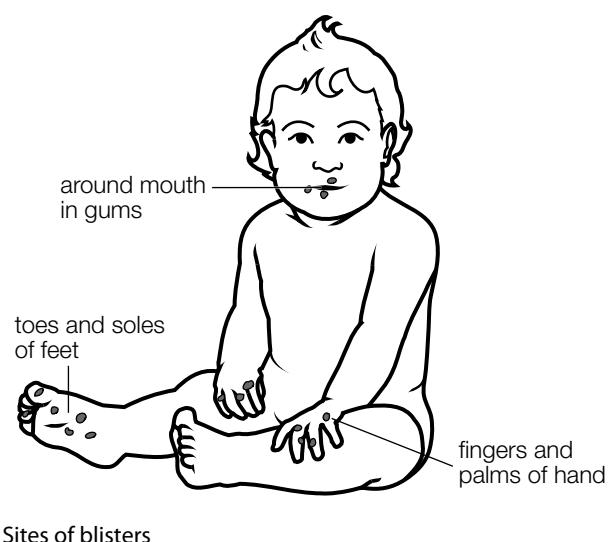
What about school or childcare exclusion?

Exclusion is not strongly recommended as it is not practical; the virus may be present in the faeces for several weeks. However, ideally the child should stay home until all the fluid in the blisters has dried up.

What is the treatment?

The infection is generally mild and can be treated symptomatically at home. Keep your child resting quietly until fever and other symptoms disappear.

- Fever and pain: Use paracetamol according to age especially for fever and a sore mouth.
- Mouth ulcers: Rinse the mouth with salt water ($\frac{1}{2}$ teaspoon of salt to 1 cup of water) after eating (if child can cope with rinsing). Avoid acidic (sour) foods that can cause stinging of mouth ulcers.
- Distress and irritability: If paracetamol is ineffective consider a mild sedative such as promethazine mixture.
- Diet: Encourage increased fluid intake (drinking with a straw may help) and soft acceptable foods including jelly, ice-cream, milk, custard, cordial drinks and ice blocks.
- Hygiene: Note the following points.
 - Parents and childcare workers should wash their hands carefully after handling the child's faeces, secretions from the nose or mouth or after contact with the skin.
 - Carefully and separately wash eating utensils or other objects that make oral contact with the patient or use disposable items to avoid transmitting the infection.
 - Boil bottle teats separately for 20 minutes before sterilising the formula in the bottles.



Hepatitis A

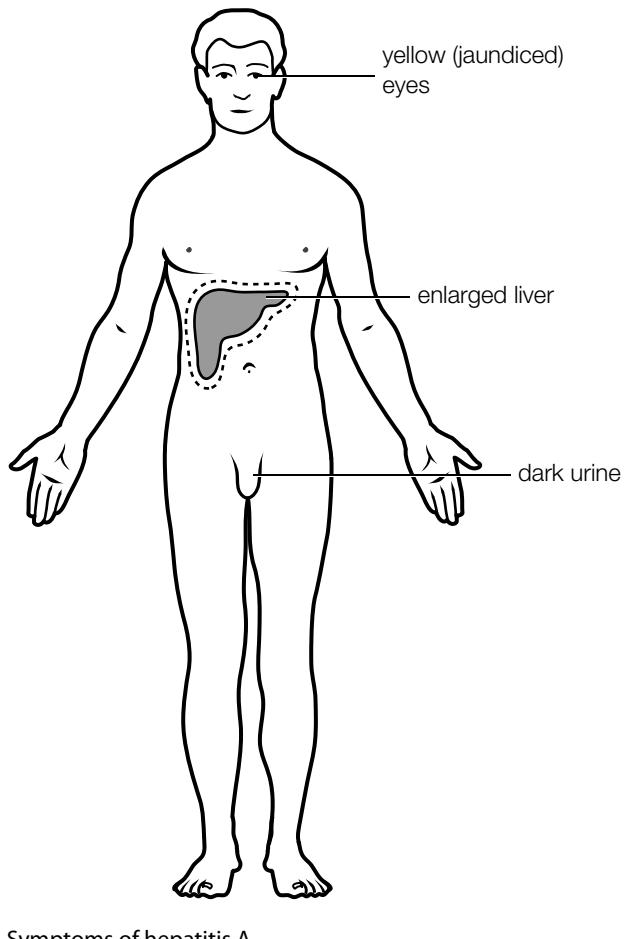
What is hepatitis A?

Hepatitis A, also known as infectious hepatitis and yellow jaundice, is a viral infection of the liver. Hepatitis means inflammation of the liver. Unlike most other types of hepatitis, hepatitis A invades the liver after it enters the body from the bowel by taking in infected food or water.

It is quite different from hepatitis B and hepatitis C.

What are the symptoms?

The main sign is yellow skin (jaundice) due to a building up of the waste pigment bilirubin in the body. Another is darkening of the urine and pale faeces. A flu-like illness may be noticed before the jaundice, including loss of appetite, nausea, fever, muscle aches and pains. Some people may never have symptoms while others may have abdominal pain. It is diagnosed by a simple blood test.



How serious is it?

Hepatitis A is usually a mild disease, especially in children, although some cases can be severe. Complete recovery is usual.

How is it spread?

The virus is present in the bowel and is spread from person to person through close contact such as infected hands, towels and food, especially from contaminated water and shellfish. That is, it gets from the faeces of the infected person to the mouth of another. It may take 15 to 50 days after picking up the virus before the disease becomes evident, with 28 days being the average time.

The patient is most infectious 2 weeks before and 1 week after the onset of jaundice.

Hepatitis A is more likely to be contracted overseas in a Third World country with poor hygiene.

How is the spread prevented?

A few simple measures based on strict hygiene can stop the disease spreading to close contacts and family members. These are:

- Wash your hands carefully after using the toilet and disinfect them with antiseptic. Also disinfect the bathroom doorknob.
- Clean bathrooms and toilets often, especially toilet seats, handles and taps.
- Do not handle food with your fingers.
- Do not share crockery and cutlery during meals.
- Protect food from flies.
- Do not use tea-towels to dry dishes.
- All family members should wash their hands often and carefully.

Note: Normal dishwashing and hot-water laundering is sufficient to sterilise your crockery, cutlery, clothing and bed linen.

Scrupulous personal hygiene is extremely important to stop the spread of infection. Food-counter employees should not handle food as well as money.

Gamma globulin injection

Your doctor may advise that each member of your family be given an injection of immunoglobulin, which protects against hepatitis for 3 months. The injection should be given within a week of exposure.

Immunisation

People can be immunised against hepatitis A by a course of two injections.

What is the treatment?

Even though the disease may be mild, medical advice is essential. Rest is very important. It is best to stay in bed until the jaundice begins to fade, but you can get up to shower, bathe and use the toilet. Try to maintain a nutritious diet and drink lots of water (at least eight glasses a day). Do not drink alcohol until you have recovered. If fatty foods upset your stomach, avoid them until you feel better. Your doctor may recommend that you stop taking certain medications (e.g. the contraceptive pill).

Hepatitis B

What is hepatitis B?

Hepatitis B is a virus that infects the liver causing it to become inflamed. It is very infectious, more so than the HIV (AIDS) virus.

How serious is the problem?

It is endemic (continually present) in some parts of the world and is on the increase worldwide.

Most people with hepatitis B recover, although some have a long and serious illness; 5 to 10% of sufferers become carriers. It may be fatal in people who get cirrhosis or cancer of the liver from it. Hepatitis B is especially serious for infants who acquire it.

What is a carrier?

A carrier is a person who has not been able to get rid of the virus from his or her body and is diagnosed by blood tests. Carriers are a risk to other people and have a responsibility to tell dentists, doctors and other people about this. The doctor will advise on how to cope.

What are the symptoms?

This depends on whether the attack of hepatitis is acute or chronic. The acute attack produces a flu-like illness and yellow skin (jaundice). In some cases there may be loss of appetite, nausea, vomiting, pain in the right upper abdomen and joint pain. The chronic form comes on slowly and is more serious. It may take months from the time you get the virus until the illness develops.

Some people may never have symptoms.

How is it spread?

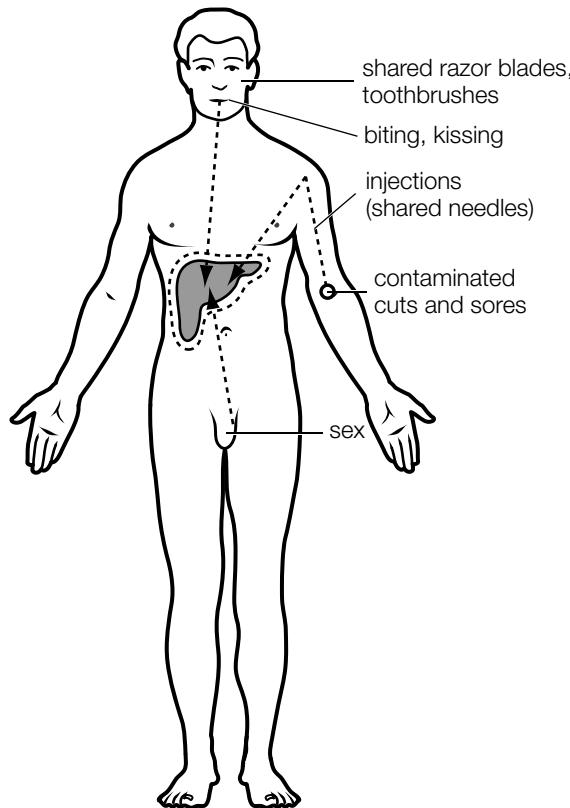
The virus is carried in all body fluids: blood, saliva, semen and vaginal secretions, breast milk, tears and sweat. It is usually picked up by absorption of infected blood through cuts and sores in the skin, by sexual intercourse or by sharing infected items such as razor blades, toothbrushes, needles and syringes. Procedures such as ear piercing and tattooing can also spread it. The most common ways are through intravenous drug use, particularly by sharing unsterile needles, and unprotected sexual intercourse with carriers. In 30–40% of cases, infections occur without a known cause.

Who is at highest risk?

- Intravenous drug users
- MSM (men who have sex with men)
- Heterosexuals and bisexuals with multiple sex partners
- Sex industry workers
- Prisoners and other institutionalised people
- Certain ethnic groups
- Healthcare workers (e.g. doctors, dentists, nurses)
- Babies born to carrier mothers (a serious problem)

Is there a cure?

- There is no easy cure, but it can be prevented.
- Prevention is done by good hygiene and vaccination.



Transmission of hepatitis B

Good hygiene

- Do not share personal items (e.g. razors, toothbrushes).
- Use a condom for sex.
- Be careful not to get another's blood on cuts or wounds.
- Do not share needles.

Vaccination

Babies are given hepatitis B vaccine as part of the normal childhood immunisation schedule (at birth, followed by another three injections at 2, 4, and 6 or 12 months of age). It is available combined with hepatitis A vaccine, and this is recommended for certain people at risk of both forms of hepatitis.

What is the treatment?

Infected people and carriers should follow the 'good hygiene' guidelines. They should eat a normal, healthy diet and reduce any alcohol to no more than one standard drink per day. Any drug dependence should be treated. Most infected adults will clear the infection over time but about 5% will develop long-term infection.

Regular liver function blood tests monitor progress. If there is liver damage, interferon and an antiviral drug such as lamivudine is usually prescribed.

Remember

- A blood test can tell whether you have immunity or are a carrier.
- Talk to your doctor about the prevention of hepatitis B.
- Be responsible and inform your contacts.

Hepatitis C

What is hepatitis C?

Hepatitis C is a blood-borne virus that infects the liver. It is the most common virus causing chronic hepatitis. About 9 in 1000 Australians carry the virus in their blood.

How do you know if you have it?

It is diagnosed by a blood test—the hepatitis C antibody test. The result will not be positive until 2 to 3 months after picking up the virus.

How serious is the problem?

Many infections are mild, but unfortunately there is a high chance (almost 70%) of developing a simmering infection called chronic hepatitis C, which is a serious problem as it leads to cirrhosis of the liver.

How is it spread?

Hepatitis C is spread by blood, especially by sharing needles from intravenous drug use (most cases), or from tattooing and body piercing.

Before 1990 it was possible to get hepatitis C from blood transfusions, but since then blood from donors has been tested for hepatitis C. There appears to be a very small risk of spread during homosexual or heterosexual intercourse. It also does not spread easily through normal family or household contact, so families and friends can be reassured. However, sharing razor blades and toothbrushes can spread the virus. Carriers have a responsibility to inform doctors, dentists and other close contacts about their infection.

What are the symptoms?

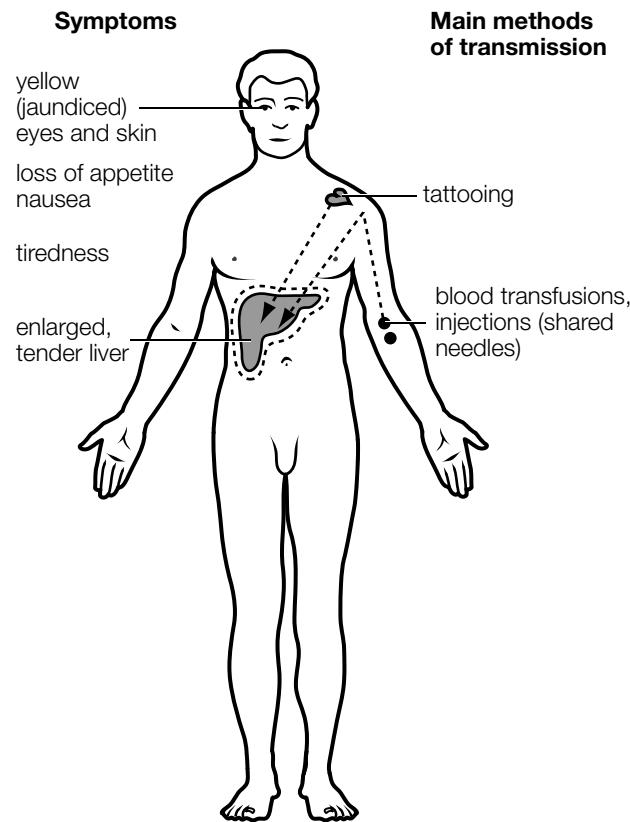
The symptoms vary from person to person and in many cases the infection may not cause any symptoms. Symptoms may take from 15 to 180 days to appear from the time of infection. The acute attack produces a flu-like illness with tiredness and yellow skin (jaundice). The serious chronic form comes on slowly, even after several years.

What happens with chronic hepatitis C?

Chronic hepatitis is more likely to occur with hepatitis C than with any of the other hepatitis viruses. This gradually causes damage to the healthy liver cells, causing hardening of the liver. This is called cirrhosis, which makes the liver fail and sometimes leads to cancer of the liver.

Who is at highest risk?

- Injecting drug users
- Sex industry workers
- Tattooed people
- Prisoners (high level of drug injections)
- People who have had kidney dialysis in the past



How can the spread of hepatitis C be stopped?

If you have a positive hepatitis C test:

- Do not donate blood.
- Do not share needles.
- Advise healthcare workers, including your dentist, about your hepatitis C.
- Do not share personal items (e.g. razors, toothbrushes).
- Wipe up blood spills with household bleach.
- Cover cuts and wounds with a firm dressing.
- Safely dispose of blood-stained tissues, tampons and the like.
- Inform sexual partners and practise safe sex.

Is there a cure?

There are drugs available to treat hepatitis C and up to 80% of people with hepatitis C can be cured, although the drugs have side effects and may need to be continued for up to 12 months. There is no vaccine currently available. There is no such thing as immunity to hepatitis C, so there is a risk of reinfection even if a person is cured, unless preventive steps are taken.

What is the treatment?

- Rest if you feel unwell.
- Maintain a nutritious diet: well balanced and low fat.
- Avoid alcohol or have only small amounts upon recovery and do not smoke.
- Keep in touch with your doctor.
- Chronic hepatitis C can be treated with interferon and other antiviral drugs such as ribavirin in suitable patients.

Herpes: genital herpes

What is genital herpes?

Genital herpes is a form of sexually transmitted infection (STI) caused by the herpes simplex virus. It produces painful ulcers on and around the genitals of both sexes.

How is it caught?

It can be caught by direct contact through vaginal, anal or oral sex. Rarely is it transferred to the genitals from other areas of the body by the fingers, and there is no proof that it can be transferred from places or objects such as toilet seats, towels, spas or swimming pools.

Note

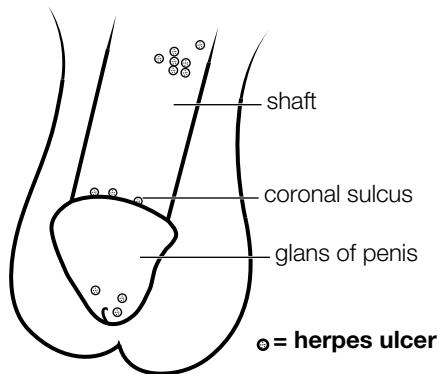
Contact is from person to person.

What are the symptoms?

With the first attack there is a tingling or burning feeling in the genital area and possibly a 'flu-like' illness. A crop of small blisters then appears; these burst after 24 hours to leave small, red, painful ulcers. The ulcers form scabs and heal after a few days. The first attack, which is the most painful, lasts about 2 weeks.

Males

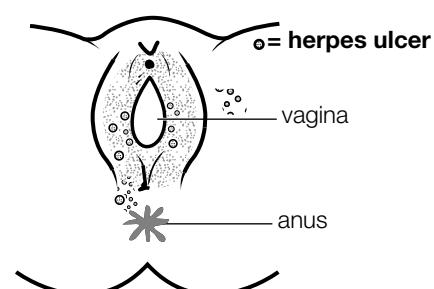
The virus usually affects the shaft of the penis, but can involve the glans and coronal sulcus, and the anus.



Usual sites of blisters in males

Females

Blisters develop around the opening of, and just inside, the vagina and sometimes on the cervix and anus.



Usual sites of blisters in females

Does it recur?

After the first infection, the herpes virus remains deep in the nerves that supply the affected area of the skin. Half of those who have the first episode have recurrent attacks; the others have no recurrences.

Fortunately, attacks gradually become milder, less frequent and usually stop eventually. Recurrences after many months or years can be precipitated by menstruation, sexual intercourse, masturbation, skin irritation or emotional stress.

It can be a nasty, dangerous problem if it develops during pregnancy. Inform your obstetrician if you have a history of genital herpes.

What should you do?

If you think you have herpes, see your doctor or attend a clinic specialising in STIs. You should not have intercourse during an attack, because you are likely to transmit the infection to your partner.

What is the treatment?

- There is no cure but it can be treated effectively.
- Rest and relax as much as possible. Warm salt baths can be soothing.
- Antiviral ointments can help if they are used as soon as symptoms start. Other agents that help are Betadine lotion or 10% silver nitrate solution.
- Ice packs or hot compresses can help.
- Painkillers such as paracetamol or anti-inflammatory drugs give some relief.
- If urination is painful, pass urine under water in a warm bath.
- Keep the sores dry; dabbing with alcohol or using warm air from a hairdryer can help.
- Leave the rash alone after cleaning and drying; do not poke or prod the sores.
- Wear loose clothes and cotton underwear. Avoid tight jeans.
- Your doctor can prescribe a special antiviral drug to reduce the severity of the attack. The drug is most effective if started on the first day of the infection.

How can it be prevented?

Spread of the disease can be prevented only by avoiding sexual contact during an attack. If you are not sure whether you are infected or not, use a condom (however, this is not absolutely protective during oral sex) and wash your genitals with soap and water immediately after sex. Condoms should always be used where a partner has a history of infection. Antiviral drugs can be used to prevent frequent recurrent attacks. Make sure your sexual contacts are informed about your problem.

Herpes simplex (cold sores)

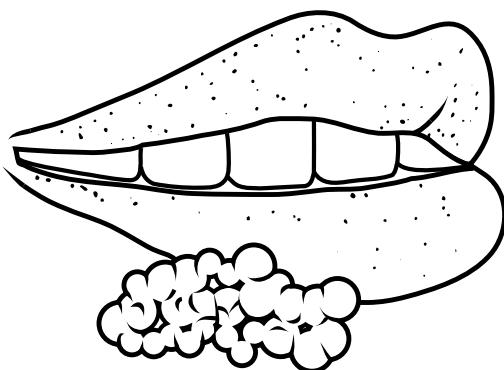
What is herpes simplex?

Herpes simplex (cold sores) is a viral infection of the skin that causes two types of infection:

1. cold sores on the lips and around the mouth
 2. genital cold sores, which are spread by sexual contact.
- This pamphlet will consider cold sores on the face.

What are the symptoms?

This common infection is known also as 'fever blisters'. The first symptom is itchiness and tingling at the site of the developing infection, usually on the edge of the lips or the skin around the mouth, nose and chin. Blisters soon appear and later burst to become crusted sores which eventually dry up and fall off in about 10 days. The person usually feels unwell with fever and tiredness. The infection occurs only occasionally in some people but frequently in others.



Herpes simplex

How does herpes simplex develop?

The primary infection (gingivo-stomatitis) usually begins in childhood as a mouth infection with painful blisters inside the mouth and on the gums. The virus then lives in the nerves supplying the skin or eyes, waiting for an opportunity to become active. It may erupt on any area of the body's skin or in the eyes. The following may precipitate eruptions:

- overexposure to sunlight
- overexposure to wind
- colds, influenza and similar infections
- heavy alcohol use

- fever from any cause
- hormonal changes such as the menstrual period
- physical stress
- emotional stress.

Does it spread?

Herpes simplex is contagious. It is present in saliva of affected persons and can be spread in a family by the sharing of drinking and eating utensils and toothbrushes or by kissing. Follow hygienic procedures and keep blisters well covered with a dressing (if possible).

It is most important not to kiss an infant if you have an active cold sore.

Cold sores can spread to the eyes (which is serious) and other parts of the body.

Is herpes simplex dangerous?

It usually presents no serious risk, but it can be very unpleasant for patients who have eczema. It also can infect the eyes, and can cause a serious ulcer on the cornea.

Special care is needed in immunocompromised patients such as those with cancer or AIDS. Severe cases can be treated with antiviral drugs.

What is the treatment?

There is no cure or special treatment; most sores heal and clear in a few days. They should be kept dry: dabbing them with Betadine, plain alcohol or, better still, a solution of menthol in SVR alcohol, will relieve itching and help keep them clean and dry.

When you feel them developing, the application of an ice-cube to the site for up to 5 minutes every hour for the first 12 hours is soothing. Also, an antiviral ointment may help, but it must be applied early to be effective. Antiviral tablets may be prescribed for severe cases.

Avoid picking the scab or breaking the blisters.

Notify your doctor if you have a persistent fever, pus in the sores or irritation of an eye.

How can it be prevented?

Those prone to cold sores should avoid overexposure to sun and wind. If you cannot, apply 30+ sun protection lip balm or zinc oxide ointment around the lips and other areas where cold sores have erupted previously.

Herpes zoster (shingles)

What is herpes zoster?

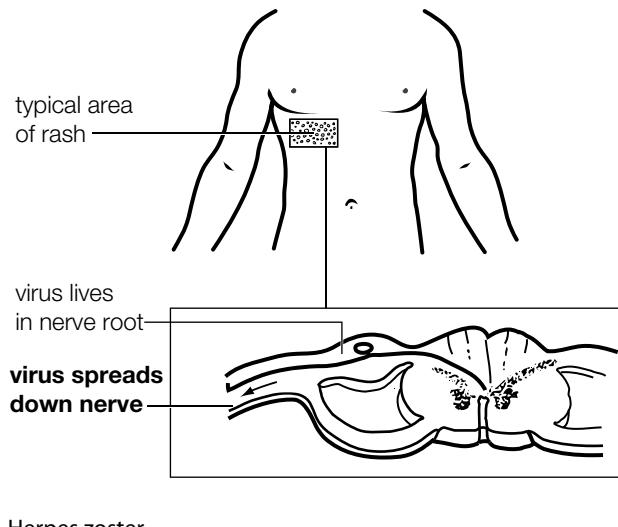
Herpes zoster is an infection in a nerve by the virus that causes chickenpox (varicella). The term comes from the Greek *herpes* (to creep) and *zoster* (a belt or girdle). Shingles is from the Latin *cingere* (to gird) or *cingulum* (a belt). It results in a skin rash with blisters and pain.

How does it occur?

Contact with someone with chickenpox may cause it, but usually it is a reactivation of the chickenpox virus lying dormant (often for many years) in the root of a nerve in the brain or spinal cord. The dormant virus can be stirred into activity by stress or by the loss of natural immunity as we get older. The virus multiplies and spreads down the nerves, causing pain in the nerve in which it resides.

Where does it occur?

Almost any part of the body can be involved, but common sites are the right or left side of the chest or abdomen and the face.



Herpes zoster

What are the symptoms?

Apart from feeling unwell, sometimes with a fever, the main symptoms are pain and a rash.

Pain

- This can vary from mild to severe.
- It is burning in nature, but can be knife-like.
- It precedes the rash and lasts for 1 to 4 weeks after the blisters disappear; it can persist for several weeks.
- It always improves in time.

Rash

Groups of blisters appear in the skin that is supplied by the nerve. They itch and become crusted. The rash disappears after about 7 days but will leave scars or discoloured skin.

Who gets herpes zoster?

This relatively common disease is unpredictable and a person of any age can be affected. It is seen more often in people over the age of 50; sometimes children will get it during a chickenpox epidemic.

Is it contagious?

Yes, but only mildly. Rarely, children might acquire chickenpox after contact with someone who has herpes zoster, but it would be very unusual to 'catch' herpes zoster from another person. It is spread when the person comes into contact with the fluid in the blisters.

Can the problem recur?

It is possible but most unlikely. One attack generally protects you from a second attack and gives lifelong immunity.

Myths about herpes zoster

It is not true that it is a dangerous disease or that the patient will go insane. Another myth is that a person will die if the rash spreads from both sides and meets in the middle: this is nonsense.

For the majority, herpes zoster is a mild disease and an excellent recovery can be expected.

What is the treatment?

There is no cure for this viral infection, but you should see a doctor without delay because proper treatment may reduce the severity of the illness and the likelihood of pain after the sores have healed. You should:

- Rest as much as possible.
- Take simple painkillers, such as aspirin or paracetamol, regularly.
- Avoid overtreating the rash, which may get infected. Calamine lotion may be soothing, but removal of the calamine crust can be painful. A drying lotion such as menthol in flexible collodion or Solugel is better.
- Modern antiviral drugs are very effective, especially for more severe cases, and are usually prescribed during the first 3 days from the onset of the rash.

What is post-herpetic neuralgia?

This is the condition of sharp burning or stabbing pain in the nerve after the rash of shingles has disappeared. It is more common in older people and in the nerves on the face. It can persist for months but can be treated with special medication.

HIV infection and AIDS

What is AIDS?

Acquired—not inherited
Immune—body's defence system
Deficiency—not working properly
Syndrome—a collection of signs and symptoms

What is the cause of AIDS?

AIDS is caused by a virus called the human immunodeficiency virus (HIV), which attacks the body's immune system and in particular a type of white cells called CD₄ cells. HIV infection may start as an acute glandular fever or flu-like illness that soon settles. However, the incubation period seems to vary from 3 months to 20 years (average 10 years), after which about 30% of people infected with HIV will develop full-blown AIDS, 40% may develop milder AIDS-related conditions (ARC) and 30% appear to remain healthy although carrying the virus. These fit people are called antibody positive, and although they are healthy they can pass the virus on to others. However, usual non-sexual contact is safe and an HIV-positive person is otherwise not a risk to the general population.

How do you catch HIV?

HIV is transmitted in semen, blood and vaginal fluids through:

- unprotected sexual intercourse (anal or vaginal) with an infected person and, rarely, from oral sex
- infected blood entering the body (through blood transfusion or by IV drug users sharing needles/syringes)
- artificial insemination
- infected mothers (to babies during pregnancy, at birth or in breast milk).

It is not 'easy to catch' other than by these means. There is no evidence anywhere that it is spread from public places (e.g. toilets, swimming pools), shaking hands or kissing, sharing eating utensils and so on.

Infection with HIV can occur via the vagina, rectum or open cuts and sores, including any on the lips or in the mouth.

What are the symptoms?

Most patients with HIV infection have no symptoms, but when AIDS develops any one or a combination of the following may be present:

- constant tiredness
- unexplained weight loss
- recurrent fever or night sweats
- decreased appetite
- persistent diarrhoea
- persistent cough
- swollen lumps (glands) in the neck, groin or armpit
- unusual skin lumps or marks
- recurrent thrush in the mouth
- mouth sores.

What does 'antibody positive' mean?

It means that people have antibodies to HIV in their bloodstream and have been infected at some stage. It does not mean they have the illness of AIDS, but means that they carry the virus and could pass it on through their blood or by sex. This antibody is detected by a special laboratory test. It may take up to 3 months to become positive after contact.

How are HIV-positive people monitored?

A person's immune status is measured through their CD₄ cell counts. HIV concentration in their blood is measured through viral load tests (that is, numbers of viruses in the blood). As the condition progresses, CD cell counts tend to fall and HIV viral load rises. These tests help doctors to decide when to commence treatment.

Can AIDS be cured or treated?

There is no absolute cure at present, but it can be readily treated. There are several antiviral drugs, including zidovudine (AZT) and lamivudine (3TC), that fight HIV. At present a combination of three of these drugs is allowing people with HIV/AIDS to live for a near-normal lifespan. However, drug resistance is a problem, particularly if people with HIV do not take the drugs exactly as prescribed. Currently there is no vaccine available.

What about blood transfusion and blood donation?

You cannot catch AIDS from donating blood. Since about 1985 all blood donations have been screened for the HIV antibody before being transfused, and so there is almost no risk of getting it from a transfusion.

What is safe sex?

'Safe sex' means sexual activities in which semen, vaginal secretions or blood are not exchanged between sexual partners. It includes touching, cuddling, body-to-body rubbing and mutual masturbation. The proper use of condoms during vaginal, anal or oral intercourse will reduce the risk of transmitting HIV. A water-based lubricant such as K-Y gel or Lubafax should be used: oil-based lubricants such as Vaseline weaken condoms.

Being responsible

HIV carriers have a responsibility to inform their sexual partners and others at risk of transmission, including medical attendants, about their HIV status.

For advice, contact your doctor, a sexual health clinic or the AIDS Council in your state or territory.

What is it?

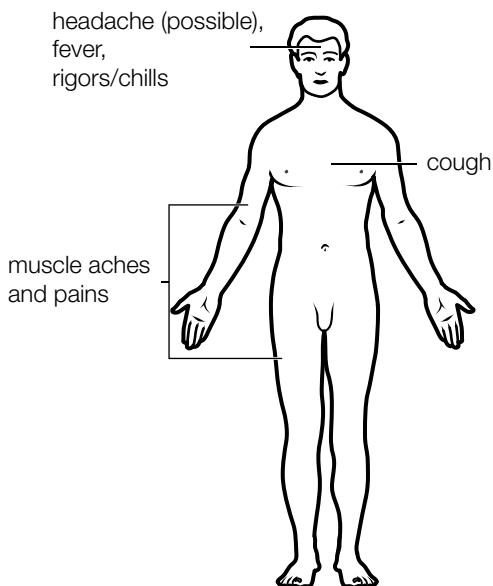
Influenza, usually called flu, is a respiratory infection caused by a virus, which is a tiny germ that cannot be seen, even under an ordinary microscope. There are several kinds of influenza virus, and they seem to keep changing just when we seem to be immune to them. However, they all produce a similar illness.

What are the symptoms?

The diagnosis of influenza is made on the presence of six of the following eight criteria during an influenza epidemic:

- sudden onset (less than 12 hours)
- fever
- dry cough
- rigors or chills
- muscle aches and pains
- prostration or weakness
- absence of upper respiratory signs
- influenza in close contacts.

These may be followed by a sore throat, a headache, a runny nose and sneezing.



Influenza—main symptoms

How is it caught?

Influenza usually comes in epidemics, when it spreads from one person to another in the spray from coughs and sneezes (called droplet infection). The virus enters the nose or throat and may spread to the lungs. It is extremely infectious.

How is it different from the common cold?

Many people refer to the common cold (which is more common) as 'the flu', but influenza is a more serious respiratory infection that usually makes the victim sick enough to go to bed. Flu tends to go to the chest and makes the

whole body ache; the common cold usually only affects the upper respiratory passages, causing a runny nose, sneezing and a sore throat.

What are the risks?

The main risk of influenza is that the infection may spread to the lungs, causing bronchitis or, worse still, pneumonia. Such complications are uncommon, and are more likely to occur in people with poor nutrition and health (especially those with a chest complaint), in the elderly and in heavy smokers.

Although influenza makes people quite ill, it is usually not dangerous. However, new strains such as avian (bird) flu or swine flu can emerge from time to time and cause lethal pneumonia. Feeling depressed after the flu is a common problem.

What is the treatment?

Like any viral infection, influenza must run its course. Symptoms can be eased and complications prevented by proper care and common sense in addition to antiviral drugs (severe cases). Report any worrying developments to your doctor (or hospital) immediately.

Self-help

- Rest. Just as a broken leg needs rest, so does the body overcome by flu. Go to bed as soon as the symptoms begin and stay there until you feel better and the fever goes away.
- Analgesics. Painkillers such as codeine compound tablets, and anti-inflammatory compounds such as ibuprofen, are more effective than aspirin at relieving symptoms. However, the choice is an individual preference, as some people respond well only to aspirin (adults only) or paracetamol. Make sure you are not allergic to the particular analgesic.
- Fluids. You lose a lot of body fluid, especially with a fever, so drink as much water and fruit juice as possible (at least 8 glasses a day).
- Special remedies. Any remedy that makes you feel comfortable is good. Freshly squeezed lemon juice mixed with honey is very good. Some people find a nip of brandy or whisky with the fruit juice soothing.

The flu will usually last 3 to 4 days, sometimes longer. Consult your doctor only if you are concerned about complications. Your doctor may prescribe one of the new anti-influenza drugs such as zanamivir (Relenza) and oseltamivir (Tamiflu). Routine antibiotics are not helpful—they are reserved for complications. Some people find that taking 1 to 2 grams of vitamin C each day helps recovery.

What about prevention?

The influenza vaccine appears to help some people, but vaccination cannot guarantee total immunity as the strain that sets off the epidemic may be new. Vaccination is worthwhile for patients at risk: diabetics, those with chronic lung disease and heart disease, those over 65 years, pregnant women, and those people whose occupation (working with crowds or sick patients) puts them at risk in an epidemic.

Labyrinthitis

What is the labyrinth?

The labyrinth is a small, bony chamber resembling a snail shell, which is situated deep in the inner ear. The chamber contains a labyrinth of semicircular canals that contain fluid. There is one labyrinth in each ear and they sense, control and maintain the balance of the body.

Labyrinthitis is inflammation of the semicircular canals of the labyrinth. It is also called otitis interna.

What is the cause of labyrinthitis?

It is most commonly caused by a viral infection of the inner ear, which usually spreads from the nose or throat along the Eustachian tube into the middle ear and then to the inner ear. Such an infection inflames the labyrinth and totally disrupts its functioning.

Other less common causes are:

- a bacterial infection of the inner ear
- a head injury.

What are the symptoms?

- Vertigo is the main symptom: you feel extremely dizzy with a sensation that you or your surroundings seem to be spinning around very rapidly
- Involuntary movement of the eyes: your eyes move slowly sideways and then flick back to their normal position
- Extreme nausea and vomiting (sometimes)
- Temporary hearing loss (sometimes)
- Tinnitus: ringing in the ear (sometimes)
- Loss of balance: especially falling towards the affected side

Note:

- The symptoms usually come on suddenly.
- Any movement of the head makes the vertigo worse.
- There is usually a preceding flu-like illness.

What increases the risk of labyrinthitis?

- A recent viral illness, especially a respiratory infection
- Spread of a chronic middle-ear infection
- Ingestion of toxic drugs
- Stress
- Smoking
- Excess alcohol intake
- Excessive salt in the diet
- Certain drugs, especially aspirin
- Cardiovascular or cerebrovascular disease.

How common is labyrinthitis?

It is uncommon but each year about 1 to 2 people in 1000 appear to develop it. Anyone can get labyrinthitis but it seems to be more common in adults.

What is the expected outcome?

It can be a self-limiting disorder (i.e. it gets better naturally) with spontaneous recovery, even without treatment, in 5 to 7 days. However, it may take several weeks to subside.

What should be done?

Anyone with severe vertigo should see their doctor at the first opportunity. If you cannot travel ask the doctor to visit you. The doctor will examine your ears with an otoscope and question you about any recent respiratory infections.

What is the treatment?

Activity

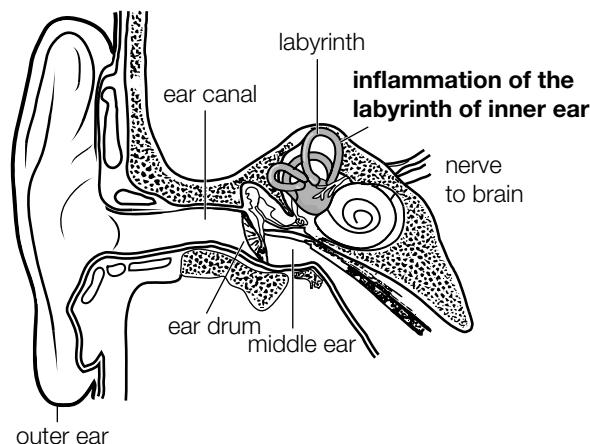
You will need to lie quietly in bed until your vertigo settles and you can move about safely. Keep your head as still as possible. The symptoms can be frightening at first but soon subside. Resume your normal activities slowly. Avoid possible hazardous activities such as driving, climbing or working around dangerous machinery until 1 week after your symptoms disappear.

Medication

Antinausea medication may be prescribed, taken by mouth or even as suppositories or injections. In some cases tranquillisers or antihistamines may be prescribed.

Diet

A salt-reduced diet is strongly recommended for at least 4 weeks.



Labyrinthitis of the inner ear

Laryngitis

What is laryngitis?

Laryngitis is a relatively minor infection or inflammation of the larynx (voice box), which is situated at the top of the trachea (windpipe) and joins it to the back of the throat. The vocal cords are in the larynx. The problem usually seems a lot worse than it really is because of the marked effect on the voice.

What is the cause of laryngitis?

It is usually caused by a seasonal viral infection that also leads to a cold or sore throat. This infection causes inflammation and swelling of the lining of the larynx, including the vocal cords. Sometimes laryngitis may be part of a more generalised infection such as pharyngitis or influenza. Laryngitis can also be caused by irritation from cigarette smoke, allergies or excessive use of the voice. Rarely, it can be due to a bacterial infection or a tumour.

What are the symptoms?

The main symptom is hoarseness, which may persist for a few days and lead to loss of the voice. Even speaking in a whisper may be painful. Other symptoms include a flu-like illness, cough, slight fever, 'tickling' in the back of the throat and tiredness. Soreness is often present over the 'Adam's apple'.

What can aggravate laryngitis?

Factors that make it worse include smoking, excessive alcohol drinking, exposure to irritants such as pollutants (including fumes), air-conditioning systems and extremely cold weather. Continuing to talk or straining your voice will also aggravate the problem.

What is the expected outcome?

Viral laryngitis gets better spontaneously but can take any time from 3 to 14 days. If the problem lasts longer than 14 days, make sure you have a check-up. You may have a croaky voice for a few days even though the infection has cleared up. If you have any breathing difficulty, contact your doctor immediately. This is rare in adults, but children can be seriously affected if it is part of the croup syndrome.

What is the treatment?

It is wise to stay at home, resting your body and your voice. Resting your voice involves not talking for long periods,

singing, talking loudly or shouting. Use your voice as little as possible. Resort to writing notes if it is very troublesome. The more you rest your voice, the quicker you will recover.

Most cases require no treatment.

Other helpful hints

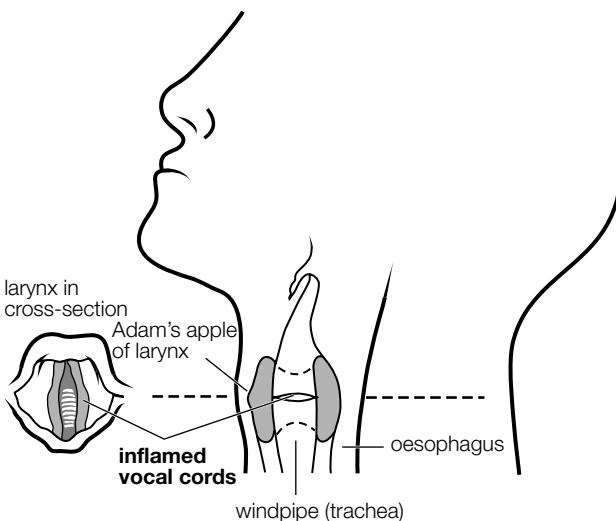
- Avoid smoking and passive smoke.
- Avoid drinking alcohol.
- Drink ample fluids, especially water, even if swallowing is uncomfortable.
- Use steam inhalations—5 minutes twice a day or more provides relief. This is preferable to commercial throat sprays and lozenges.
- Hot steamy showers also help.

For significant discomfort, use relieving non-prescriptive drugs such as paracetamol, aspirin or cough syrup. Some people find soluble aspirin gargles soothing.

Do not give aspirin to children under 16 years.

Use of antibiotics

Antibiotics are not used as a rule since laryngitis is usually due to a viral infection and antibiotics do not kill viruses. In rare cases laryngitis may be caused by bacteria and your doctor will prescribe an antibiotic upon diagnosis.



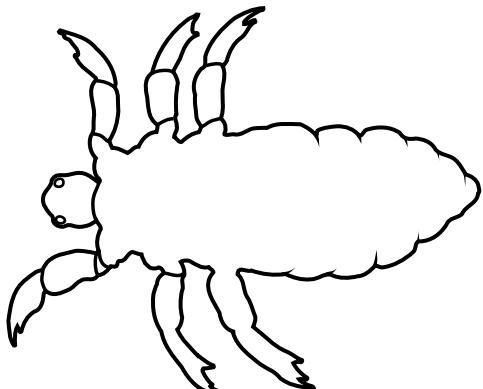
Lice: head lice

What are head lice?

Pediculus humanus capitis is the head louse. This small insect, which lives on human hair, sucks blood from the skin of the scalp. It has no wings and can only crawl. The female louse lays eggs (or 'nits'), which are glued to the hairs and hatch within 6 days, mature into adults in about 10 days and live for about a month.

How are they spread?

Head lice spread from person to person by direct head-to-head contact, such as cuddling, sitting and working very close to each other. They can spread by sharing combs, brushes, headwear, towels and pillowcases, especially within the family. Children are the ones usually affected, but people of all ages and from all walks of life can be infested. It is more common in overcrowded living conditions.



actual size
of mature louse



actual size
of nit on hair



An adult head louse

What are the symptoms?

Head lice may cause itching of the scalp, but often there are no symptoms. The white spots can be mistaken for dandruff.

How is it diagnosed?

The finding of lice or nits on the head is the only way to diagnose infestation. This is done by the 'wet comb' method, using a special nit comb (ask your pharmacist).

1. Comb hair conditioner onto dry, brushed, detangled hair.
2. Wipe the conditioner from the comb onto a paper towel or tissue.
3. Inspect the tissue and comb for lice and eggs.
4. Repeat for every part of the head 2 more times.
5. If eggs or lice are found, treat the person.

What is the treatment?

Topical insecticide medication

The best treatment is a permethrin scalp preparation or pyrethrin/piperonyl butoxide (Lyban) foam shampoo or conditioner, which are effective in killing both the lice and eggs. Malathion is also useful, especially if the lice are resistant to permethrin. Follow the instructions on the bottle carefully. The hair does not have to be cut short if the medication is properly and thoroughly applied. Shampoos are used on wet hair while lotions are used on dry hair.

Where should it be applied?

Apply to all the hair of the head only.

Method

- Massage well into wet hair using minimal water.
- Leave at least 20 minutes (or as directed on the medication label).
- Wash off thoroughly (avoid eye contact).
- Repeat after 7 to 10 days.

How often?

Apply once a week for 2 weeks. Two applications should be sufficient to clear the lice.

Combing

The eggs can be removed after treatment by combing with a fine-tooth metal comb while the hair is wet.

Eyelashes and eyebrows

If the nits are present, apply Vaseline in a thick layer twice a day for 8 days.

Note

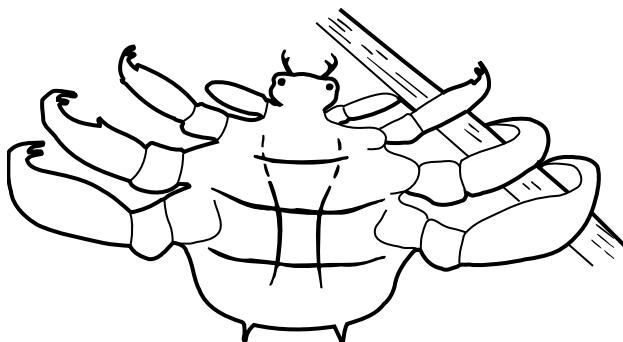
- Head lice are not associated with lack of cleanliness.
- Ordinary hair washing cannot prevent or cure them.
- If one member of the family has them, all members must be examined and treated if lice or nits can be detected.
- The source of head lice is the home, not the school.
- Wash pillow cases on a hot cycle or put in a clothes dryer on the hot setting for 10 minutes.
- Make sure combs and brushes are free from lice by soaking them in very hot water (about 60°C) for 10 minutes.
- A proven effective alternative treatment is to use any ordinary brand of thick conditioner on dry, brushed and untangled hair and then comb with a fine-toothed metal lice comb. Repeat every 3 days for up to 3 weeks.
- In any case, if using chemical treatments, wash the hair then rinse with a conditioner every 2 to 3 days between the two chemical treatments.
- Although regulations vary from state to state, exclusion from school should not be necessary after proper treatment.
- All antilouse preparations are toxic, but they are safe if the special head louse lotions are used according to the directions. Keep all preparations out of the eyes and out of the reach of children.

Lice: pubic lice

What are pubic lice?

Pubic lice infestation, or 'crabs', is caused by the pubic louse (or crablouse), *Pthirus pubis*. These insects are usually found tightly attached to the hairs of the pubic region, less commonly to the hairs of the legs, the underarms or the beard. They suck blood as their food while clinging to pubic hair. In young children the lice can occasionally be found on the eyelashes or on the hair of the forehead. Their eggs (nits) are attached to the hair shaft after being laid. The lice live for about 3 weeks.

Pubic lice don't voluntarily leave the body.



A crablouse attached to a hair shaft (actual size is 1 to 2 mm)

How are they spread?

Crablice are transmitted by close personal contact, especially during sexual intercourse. They may be transmitted to young children by contact with heavily infested parents. They can also be spread by contact with towels, undergarments and bedding of an infected person.

What are the symptoms?

There may be no symptoms, but the infestation or itching may be the main complaint. Small red sores may be seen. The pubic area may have a musty smell.

How is it diagnosed?

Diagnosis is made by direct inspection and finding eggs or lice tightly applied to the hair shaft. The lice may be seen to move like crabs, but usually are seen as rust-coloured specks in the pubic hair.

What is the treatment?

Topical medication

The treatment of choice is permethrin cream or lotion. The skin should be cool, clean and dry when permethrin liquid is applied. Other topical insecticides, such as malathion, may be effective.

Where should it be applied?

- The whole body from 'neck to toes' should be treated including the perineum (the skin between the vagina or scrotum and anus) and the anal area.
- Follow the instructions on the medication carefully.
- Concentrate the cream on the hairy parts of the body. Do not apply to the scalp hair and eyelids.
- Leave overnight and wash the cream off the next morning.
- Where the lice or their eggs are attached to eyelashes, insecticides should not be used; cure can be achieved by the liberal application of Vaseline to the lashes (twice daily for 8 days).

Note:

- Shaving the pubic hair may help but it is not essential.
- Comb the pubic hair with a lice comb to remove nits.

How often?

Repeat the treatment in 7 to 10 days. Sometimes a third treatment is necessary.

Persistent itch

The itch may continue after treatment. Check with your doctor, who may prescribe an anti-itch preparation.

Clothing and bedding

Any towels, bedclothes and underwear used in the last 2 days of treatment should be washed normally in a hot machine wash after treatment and hung in the sun to dry.

Contacts

Sexual contacts and the family must be treated. Young children can be infested from heavily infested parents. Avoid close personal contact until you and your contacts or partner are treated.

There is a risk of a person with pubic lice having other sexually transmitted infections.

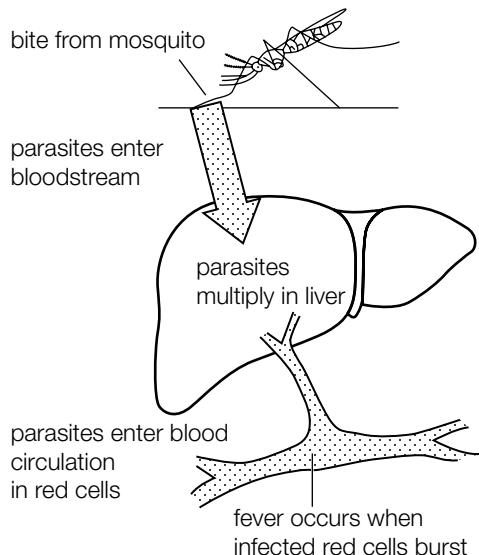
Malaria

What is malaria?

Malaria is a tropical or sub-tropical infection caused by tiny parasites called plasmodia. There are four different types of the *Plasmodium* parasite—*vivax*, *ovale*, *malariae* and *falciparum*. *Vivax* and *falciparum* are the most common types, while *falciparum* is the most dangerous.

How is malaria spread?

The parasites are transferred from one person to another by the female *Anopheles* mosquito. When the mosquito bites a person with malaria, it sucks up blood-containing malaria parasites, which then multiply inside the mosquito. When the same mosquito bites another person, it injects many thousands of the parasites into the bloodstream. They then enter the liver, where they continue to multiply. Uncommon means of transmission are from mother to infant and via a blood transfusion.



The transmission of malaria into the blood system

What are the symptoms?

Initially, there are no symptoms but 1 to 4 weeks after the bite the following symptoms (which resemble a flu-like illness) develop:

- headache
- tiredness and fatigue
- muscle pains
- nausea.

Twelve to 24 hours later, an attack of fever occurs, with:

- sudden chills and shivering
- fever with rapid breathing
- profuse sweating.

These paroxysms of fever occur in regular cycles every 2 or 3 days (depending on the type of parasite) whenever the parasites are released into the bloodstream.

Other symptoms include cough, diarrhoea and abdominal pain.

The symptoms are especially severe in children.

Vivax and *ovale* parasites can lie dormant in the body for a number of years, then become activated to cause symptoms.

How common is the problem?

It is very common in tropical areas, with an estimated 500 million cases each year. The number of cases of malaria in Australia has risen sharply in the past 30 years due to increased travel to endemic areas and the number of immigrants and refugees settling here. Malaria is the most common cause of fever in returned travellers and is responsible for more than 2 million deaths in the world each year.

What are the risks?

Anaemia may develop because the parasites destroy red blood cells. *Falciparum* malaria can be fatal because it tends to target all the organs of the body leading to shock and subsequent death. It is also responsible for one lethal syndrome called cerebral malaria, which can cause seizures, coma and death.

How can malaria be prevented?

Malaria can be prevented by avoiding mosquito bites and taking antimalarial medication when visiting malaria endemic areas in Africa, Asia, and Central and South America.

- Avoid mosquito bites by wearing long, loose and light-coloured clothing, using tropical-strength insect repellents (those containing DEET are best) and avoiding the outdoors (especially in rural areas) after dusk and at dawn. Sleep in screened rooms or use mosquito nets impregnated with repellent. Avoid using cologne, perfume or aftershave lotion.
- Take antimalarial drugs before exposure and up to 4 weeks after exposure to give maximum protection. Your doctor will select the appropriate drug for the location, including a substitute for chloroquine-resistant areas.

Destroying mosquito breeding areas is also an important strategy. Mosquito coils and plug-in vaporising devices can also be used to repel them.

How is malaria treated?

Effective antimalarial drugs, including intravenous medications, are available to treat malaria and will cure most cases. Since malaria is life-threatening, early treatment in hospital is vitally important. Special blood tests are needed to identify the type of parasite. Anyone at risk who develops features of malaise, headache and a sudden fever resembling flu should seek treatment without delay. If untreated, attacks of malaria can continue to occur for years, with the exception of *falciparum*, which may not recur after one very severe bout.

Molluscum contagiosum

What is molluscum contagiosum?

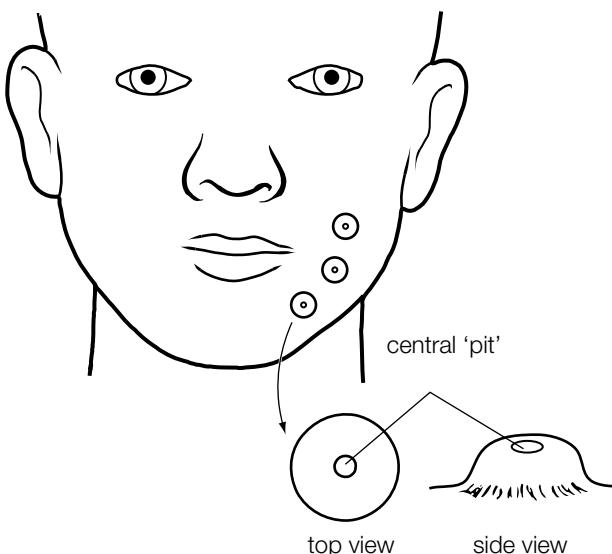
Molluscum contagiosum is a common and contagious viral infection that causes small, firm, wart-like lumps anywhere on the body. It usually occurs in school-age children. It also occurs in adults, where it is commonly found on the genitals, inner thighs and abdomen and is usually sexually transmitted.

What is the cause?

Molluscum contagiosum is caused by a poxvirus. It is contagious and spreads by direct contact from person to person, although some poxviruses may be transmitted indirectly. Children usually pick up the infection from family members or other infected people with whom they swim or bathe. Bath toys can even spread the virus. The incubation period can vary from 2 weeks to 26 weeks. The virus can be spread by scratching and by cortisone therapy. People with a depressed immune system, such as those with HIV infection, are prone to the infection.

What are the signs and symptoms?

The mollusca are small, firm, white or pearly lumps shaped like domes. In the centre of each lump is a small pit about 3 to 5 mm in diameter. Some may grow to as large as 10 to 20 mm. They are filled with a cheese-like fluid. The lumps can be solitary or, more commonly, multiple. The lumps do not hurt or itch but can cause eye irritation if present on the eyelid. Some people find the lumps slightly itchy.



Typical appearance of molluscum contagiosum

Where are the lumps found in children?

They can be found anywhere on the body but are more common on the face, the trunk, the armpits and the backs of the knees. Although they can be generalised, they tend to be confined to a particular region.

What are the complications?

The problem is not dangerous but dermatitis or a bacterial infection can develop. Scarring can occur with larger lumps. People with HIV infection can develop lots of lumps, which is difficult to treat.

What happens to the lumps?

If untreated, just a few lumps can increase rapidly over a few weeks and can keep appearing up to 1 year later. However, all lumps will eventually disappear by themselves when the body's immune system is able to respond and destroy them. This rejection usually takes from 6 to 24 months but can take many years.

What is the treatment?

Preventing spread

Avoid scratching the lumps and keep out of shared swimming pools or spa baths. Do not share baths with other children and do not share towels, face washers or clothing.

Specific treatment

There are 101 different treatments that doctors use to treat the condition, but no 'magic' cure, and treatment is not always needed. It is not advisable to use painful methods such as deep pricking and lancing in children with small uncomplicated lumps (children under 10 years do not tolerate painful methods very well). Doctors may advise using various methods to stimulate the immune response and treat the condition. For large areas, apply aluminium acetate (Burow's solution, 1:30) or wheatgrass recovery cream (Dermawheat) twice a day. For smaller areas, daily dabbing of benzyl peroxide 2.5% or 10% povidone-iodine (Betadine) after gently lifting open the tip of the lump with a sterile needle inserted from the side (parallel to the skin) is worthwhile. The lump can then be covered with low-allergy paper-based tape such as Micropore or duct tape. A simple but protracted method is to cover the lump or lumps with this tape only and replace it every second day.

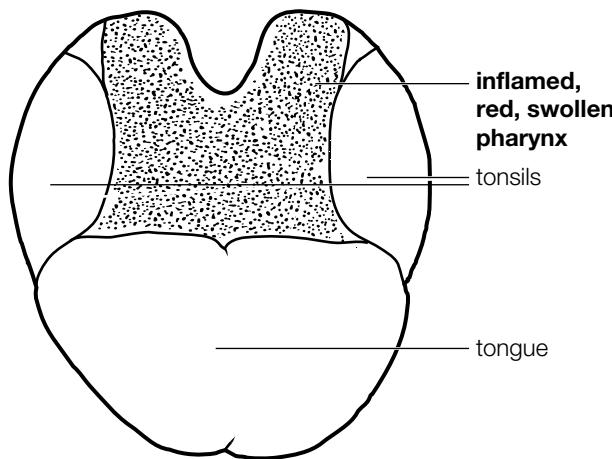
Another method is to apply liquid nitrogen to the lump and cover it with dry dressings for 2 weeks (this works better in adults). The application of imiquimod 0.1% cream 3 times weekly for as long as advised is also effective. The most effective method is for a doctor to extract the core with a large needle or curette. It is best to avoid antibiotic and cortisone ointments if the lumps are inflamed. Wash your hands after touching the lumps.

School children can go to school and play with other children if clothing covers the lumps.

Pharyngitis

What is pharyngitis?

Pharyngitis is inflammation and infection of the pharynx, which is that part of the throat at the back of the tongue between the tonsils and the larynx.



What is the cause of pharyngitis?

The most common cause is a viral infection, which may be part of a common cold or a direct infection. Bacterial and fungal infections are also causes. Irritation and inflammation of the pharynx can also result from irritants such as cigarette smoke, alcohol or excessive use of the voice such as talking above excessive noise. Oral sex may lead to infection with sexually transmitted infections. Various disorders, such as diabetes, immune deficiencies such as AIDS and poor general health make people prone to pharyngitis.

What are the symptoms?

This depends on whether the infection is acute (sudden onset), which is more severe, or chronic. The following symptoms vary in severity:

- sore throat
- 'tickly' or lump in throat

- difficulty swallowing
- fever (in more severe cases)
- red, swollen throat
- possible muscular aches and pains.

How common is the problem?

It is very common and is by far the most common cause of a sore throat. On average, a person consults a doctor once each year with pharyngitis. It tends to occur in people who are overworked and fatigued.

What is the usual outcome?

With most cases of pharyngitis the throat is extremely sore for 2 to 3 days and then settles quickly. However, if it is due to a bacterial infection, it usually persists and you tend to feel quite ill with fever. This requires medical attention.

What is the treatment?

Self-help

- You and your throat need a rest.
- Do not smoke.
- Have a fluid or soft diet for a few days.
- Drink extra fluids: at least 8 glasses of fluid daily.
- Take aspirin or paracetamol regularly (e.g. two soluble tablets 4 times a day). Children should have paracetamol rather than aspirin (avoid aspirin under 16 years).
- Commercial soothing lozenges and mouthwashes may help: avoid those with a topical anaesthetic effect.
- Gargles help give symptomatic relief: a salt solution is useful (mix 1 teaspoon of salt in 500 mL warm or hot water). When the solution cools, gargle as often as you wish.

Medical help

Your doctor may prescribe an antibiotic if inspection of the throat reveals severe pharyngitis due to a bacterial infection. It must be emphasised that most cases are due to viruses and antibiotics make no difference.

Pneumonia

What is pneumonia?

Pneumonia is a term used to describe inflammation of lung tissue usually due to an infection with bacteria or viruses. If it involves an area or lobe of the lung it is called lobar pneumonia. If it is patchy it is called bronchopneumonia. It may affect one or both lungs (if both lungs are affected it is sometimes known as double pneumonia). If it is caused by bacteria other than the typical ones, it is called atypical pneumonia. It is also classified as hospital acquired or community acquired, which is what is commonly seen in general practice.

What are the causes?

There are several causes of pneumonia including inflammation from inhalation of chemicals such as various liquids, smoke and poisonous gases such as chlorine.

However, it is usually caused by infection from a bug (germ) and includes:

- viral pneumonia (e.g. influenza)
- bacterial pneumonia (e.g. pneumococcus, *Haemophilus*, *Staphylococcus*)
- mycoplasma causing atypical pneumonia
- *Pneumocystis jiroveci* pneumonia (a feature of AIDS).

The germs are inhaled into the lungs and multiply in tissue when the person's immunity cannot deal with them.

Who gets pneumonia?

It can affect people of all ages, even healthy people, but it is most severe in young children and adults over the age of 65. The risk of contracting pneumonia increases with:

- newborn and infants
- lowered resistance from diseases (e.g. heart disease, cancer, chronic lung disease)
- smoking
- poor general health from any cause
- lowered immunity (e.g. HIV infection, drugs)
- crowded living conditions, poor sanitation
- alcohol dependence
- hospitalisation including major surgery.

What are the symptoms?

Common

- Cough with sputum
- Fever with possible chills
- Shortness of breath
- Fatigue

Possible

- Chest tightness or pain
- General aches and pains

How is pneumonia diagnosed?

Pneumonia is diagnosed by the doctor listening to the chest with a stethoscope, by X-rays and by sputum culture.

What are the risks?

It is the most common cause of death in the world and mainly affects malnourished children in Third World countries without optimal medical care.

Lung complications include painful pleurisy (inflammation of the membrane covering the lung), a pleural effusion and a pulmonary abscess.

However, most cases are curable in 1 to 2 weeks with treatment.

What is the treatment?

Treatment at home

This is acceptable if you are generally healthy and the pneumonia is not severe.

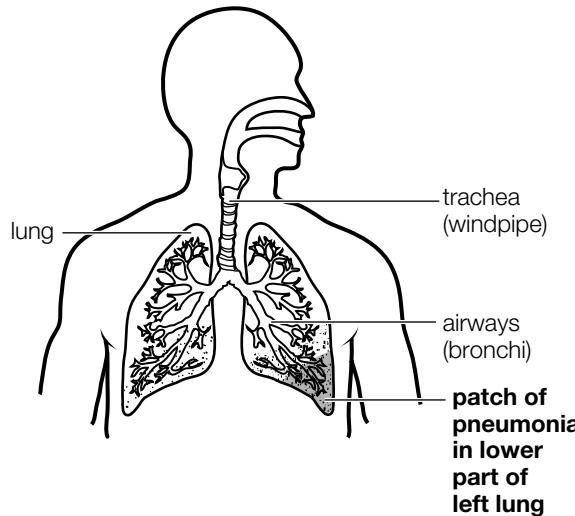
- Rest is important.
- Drink lots of fluids.
- Take prescribed antibiotics, especially for bacterial pneumonia, preferably following a sputum culture to identify the bug and its sensitivity to antibiotics (as organised by your doctor). Antibiotics are now also available for other forms of pneumonia including influenza, where newer antiviral agents are used.
- Take analgesics such as paracetamol or anti-inflammatory drugs such as ibuprofen.
- Avoid cough-suppressant medication.

Hospital treatment

This is advisable for moderate to severe pneumonia, for symptoms not responding quickly to antibiotics and those already in poor health. Some strains of pneumonia such as influenza can cause rapid progression to a life-threatening state, making immediate hospitalisation important.

How is pneumonia prevented?

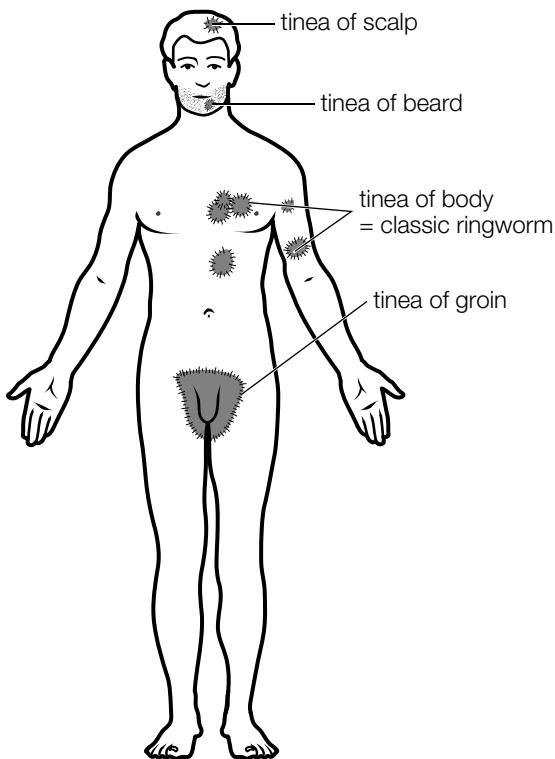
- Avoid smoking—it damages the lung tissue.
- Obtain prompt medical attention for respiratory infections, especially if you have an existing problem.
- Immunisation:
 - influenza—the annual 'flu' injection in autumn
 - pneumococcus—recommended for those over 65 years and those at risk.



Ringworm (tinea)

What is ringworm?

Ringworm, which is also referred to as tinea, is a fungal infection of the skin. It causes a superficial infection of the surface layer (keratin) of the skin, resulting in scaly, itchy patches. The classic ringworm, of course, is the well-known red ring that is usually seen on the trunk of the body, but it can take on forms other than the 'ring'. The fungi are referred to as dermatophytes and there are three main types that infect the skin of humans.



How is it transmitted?

The fungus is found almost everywhere and can be acquired from animals (*zoophilic*), from other humans (*anthropophilic*) and from the soil. In general, fungi transmitted from animals such as a pet cat or dog are more contagious and cause more severe inflammation of the skin. The guinea pig is a potent source of tinea of the face.

Person-to-person contact is a common mode of transmission. The fungi from infected people can contaminate objects such as towels, shoes, dressing-rooms or shower stalls, thus contact with these surfaces facilitates spread.

The risk is higher with:

- crowded living conditions
- day-care centres or schools
- communal bathing areas
- close contact with animals.

What are the types of ringworm (tinea)?

- Tinea of the scalp (tinea capitis): This causes patchy hair loss (bald patches) and scaling of the scalp. The hair may break at the surface of the scalp producing a black dot appearance. It is usually seen in children and can be difficult to clear up. It is caused by *Microsporum canis* typically acquired from dogs and cats.
- Tinea of the body (tinea corporis): This is the classic ringworm we are familiar with that appears on the trunk and limbs. It starts on the trunk as a small, round, red patch which is scaly and itchy. The patch gradually grows until it is about 25 mm across; as it gets bigger the central area heals, leaving a red ring on the skin at the edge. After a week or two, other patches may appear nearby and sometimes can spread quickly.
- Tinea of the groin (tinea cruris): Also known as Dhobie itch and jock itch, this is a common infection of the groin area of young men, usually athletes.
- Tinea of the feet (tinea pedis): This is the common tinea in the skin between the toes with smelly macerated scaling. It can extend onto the soles of the feet.
- Tinea of the nails (tinea unguis): This can affect both toenails and fingernails, causing thickened, discoloured crumbly nails with crusting at the free edge.
- Tinea of the beard (tinea barbae): This may cause an itchy, boggy swelling called a kerion.

The diagnosis is made by taking skin, hair or nail scrapings and performing microscopic examination and culture.

What are the complications?

These include chronic nail infection with nail destruction, a pustular mass in hair called a kerion and secondary bacterial infection of the ringworm lesions such as cellulitis.

What is the treatment?

Treatment is usually with topical medications such as clotrimazole or terbinafine applied twice daily for 4 weeks. There are a number of other preparations that can eliminate milder cases of tinea. Discuss treatment with your doctor. For more severe infections such as tinea of the scalp, beard and nails, medication taken by mouth is usually essential.

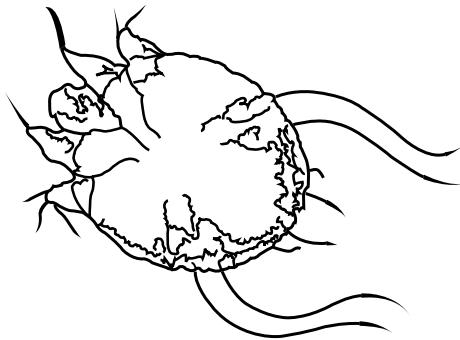
Some rules of management

- Attend to personal body hygiene, especially of the feet.
- Keep the skin dry.
- Have your pets with suspected ringworm checked by a veterinary surgeon (don't forget about guinea pigs).
- Keep a child with ringworm away from school until the condition clears.
- Keep infected hair and nails cut short.
- Infected people should not share headwear, towels, bed linen, combs or brushes.

Scabies

What is scabies?

Scabies is a highly infectious skin infestation caused by a tiny mite called *Sarcoptes scabiei*. The mite, which is a type of arthropod, burrows just beneath the skin in order for the female to lay her eggs. She then dies. The eggs hatch into tiny mites, which spread out over the skin and live for about 30 days only. The mites cause an allergic rash.



The appearance of an adult scabies mite (actual size is 0.5 mm)

How is scabies spread?

The mites are spread from person to person through close personal contact (skin to skin), including sexual contact. They may also be spread through contact with infested clothes or bedding, although this is uncommon. Sometimes the whole family can get scabies. The spread is more likely with overcrowding and sexual promiscuity.

What are the symptoms?

- Intense itching, causing scratching
- A red, lumpy rash

The itching is worse with warmth and at night. The scratching may cause sores and scabs. The allergy may result in eczema.

Where does it occur?

It usually occurs on the hands and wrists. Other common areas are the male genitals, buttocks, elbows, armpits, waistline, nipples in females, feet and ankles.

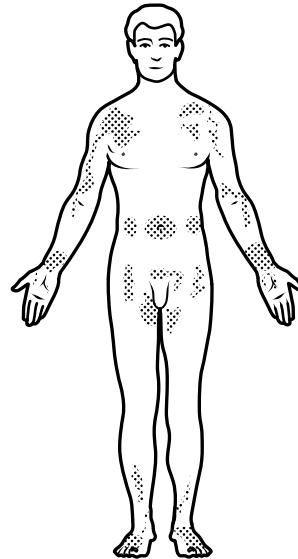
How is it diagnosed?

Scabies is diagnosed by its very itchy, lumpy rash. It is rare to find the tiny mites, but it may be possible to find them in the burrows, which look like small wavy lines. When dug out, they are examined under the microscope.

What is the treatment?

Topical medication

- All ages (except children under 6 months): permethrin 5% cream
- Children under 6 months: benzyl benzoate 25% solution but diluted in water



Typical distribution of the scabies mite

Where?

Apply the cream or lotion to the entire body from the jawline down to the soles of the feet and tip of the toes (even for genital scabies). Make sure you treat under the nails, in all the skin folds in between the fingers and toes and the genitals. Avoid the eyes, nose and mouth.

How?

First have a warm shower (not too hot). Use a clean washer and towel, and allow the skin to dry. Paint the lotion on all the skin thoroughly with a brush such as a shaving brush or paint brush. Do not rub your eyes or wash your hands. Put on clean clothes. Leave on the skin for a minimum of 8 hours (usually overnight), or for 24 hours (for a treatment failure) for permethrin and for 24 hours for benzyl benzoate, then have a shower or bath.

How often?

For best results the treatment should be repeated in a week, but check with your doctor.

Clothing and bedding

Remove pillows and sheets, pyjamas and underwear after the second shower and wash them normally in hot water as a separate load. Hang the washing in the sun.

Note

- The whole family must be treated at the same time, even if they do not have the itch (one application is sufficient). Use separate towels and brushes.
- Sexual partners should be treated.
- Itching can continue long after successful treatment; resist repeated treatments, but check with your doctor who will prescribe an antipruritic (anti-itch) preparation.
- Spray pillows, mattresses, chairs, car seats, prams and other soft articles with insect spray.

Sinusitis

What is sinusitis?

Sinusitis is an inflammation of the sinuses, which are air-filled cavities adjacent to the nose lined by mucous membrane. Of the several sinuses, those most likely to be affected are the frontal sinuses (in the forehead just above the eyes), the ethmoidal sinuses (between the eyes) and the maxillary sinuses (in the cheekbones). The maxillary sinuses are the most commonly affected.

Sinusitis can be divided into acute (sudden onset) and chronic (persistent).

What is the cause?

The common cause is a viral upper respiratory infection involving the nose that spreads to the sinuses. The mucous membranes lining the nasal cavity connect with those that line the sinuses. The swollen membranes can block the openings of the sinuses to the nose and secondary infection by bacteria that normally live in the nose can complicate the infection.

Other causes include irritation to the nasal airways from allergies, extreme cold, smoking, a foreign body in the nose or jumping into water without holding the nose.

What are the symptoms?

Depending on which sinus is involved the symptoms include:

- worsening of the cold with blocked nose and green-yellow discharge
- feeling of pressure inside the head
- feeling quite ill
- fever
- discharge from the nose
- headache over one or both eyes, worse upon waking in the morning or when bending forwards
- nasal speech with difficulty breathing through the nose
- post-nasal drip, maybe purulent (containing pus)
- cheek pain resembling toothache
- nose bleeding (occasional).

What is the treatment?

Self-help

Usually, if it is a viral infection, the condition clears up by itself. In the early stages it is worth treating the condition with rest, steam inhalations, aspirin or paracetamol and decongestants (tablets or nasal sprays). Blow your nose as often as necessary into tissues and then dispose of them.

Medical help

Your doctor will advise on the best way to use decongestants.

Antibiotics

These are usually prescribed for bacterial infection only.

What are the complications?

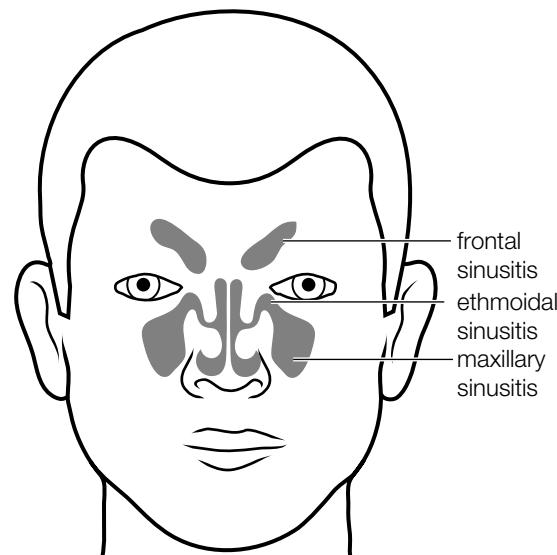
Sinusitis usually clears up by itself, assisted by antibiotics if your doctor considers them necessary. If mucus and pus accumulate and do not resolve by draining properly, it may be necessary to have the sinus or sinuses surgically drained. Often sinusitis persists as chronic sinusitis.

Chronic sinusitis

Sometimes the infection does not totally clear up and the sinus remains blocked with milder symptoms such as:

- a stuffy feeling in the head
- blocked nose
- constant nasal dripping, often offensive
- vague pain in the cheeks
- toothache
- halitosis (bad breath)
- malaise (i.e. feeling unwell).

The treatment for chronic sinusitis is similar for acute sinusitis but nasal inhalations and decongestants should be used under medical supervision because long-term use may cause damage to the sinuses and nasal passages. Doctors may prescribe a nasal steroid spray which may help reduce inflammation of the sinuses.



What is tetanus?

Tetanus is a life-threatening bacterial disease that causes painful muscle spasms and breathing difficulties. The responsible bacteria is *Clostridium tetani*, which invades the body through a wound from a contaminated object. It multiplies in dead skin or in muscle and produces a toxin that attacks spinal cord nerves, which control muscle activity.

How is it acquired?

The tetanus bacteria are present in soil, dust and manure. The bacteria may enter through any skin wound, usually through a puncture from a thorn, splinter, nail or similar sharp object. Note that tetanus is not contagious and cannot be transmitted from person to person.

What are the symptoms?

After an incubation period of anything from 2 to 3 days to as long as several months, the patient may experience:

- muscle spasms that start in the jaw and neck
- difficulty opening the mouth (lockjaw)
- swallowing problems
- breathing problems
- painful spasms in muscles of limbs, spine and abdomen
- fever and rapid pulse.

What are the risks and complications?

About 1 in 10 people infected with tetanus will die.

There is a very high death rate from respiratory paralysis and heart failure, despite the best intensive care.

Who is at risk?

Anyone who has not been immunised against tetanus or who has not kept up to date with preventive vaccinations is at risk, but especially:

- diabetics
- those working with soil, horses
- intravenous drug users
- those living in crowded or unsanitary living conditions
- at-risk wounds (e.g. burns, skin ulcers, surgical wounds, compound fractures)
- babies born in a contaminated environment
- penetrating injuries (e.g. nails, splinters, other foreign bodies)

- crush injuries
- animal bites.

Tetanus is uncommon in developed countries, including Australia, because of a good vaccination program.

How is tetanus prevented?

Immunisation

The key to prevention is immunisation, which comes as a combined vaccine. It is usually given:

- routinely to children at age 2, 4 and 6 months and 4 years
- Year 10 of secondary school (about age 15 years) as a booster
- at age 50 years as a booster (if no booster in the previous 10 years)
- at the time of injury
- at the time of injury (if more than 5 years since the last booster)
- as a catch-up when necessary (when doses have been missed in the past).

Avoiding skin-wound contamination

Reduce the risk when working in contaminated areas such as by wearing gloves while gardening.

Treating 'tetanus-prone' wounds

Seek medical treatment if you sustain a tetanus-prone wound. Clean the wound with soap and water and apply an antiseptic. Wounds at risk include those contaminated with dirt, soil, manure or faeces, saliva or other 'foreign' material; puncture wounds; and wounds from missiles, crushes and burns.

If there is doubt about your immune status, you will receive a tetanus toxoid booster and an injection of tetanus immunoglobulin to boost your immune response and act as an antitoxin by neutralising the toxin.

What is the treatment?

Tetanus is treated in hospital, usually in an intensive care unit. The treatment includes:

- antibiotics
- tetanus antitoxin (immunoglobulin)
- anticonvulsant medications
- life-support such as an artificial respirator.

The aim of treatment is to keep the body going for the 3 weeks or so that tetanus takes to run its usual, natural course.

Tinea pedis

What is tinea pedis?

Tinea pedis, also called athlete's foot, is a fungal infection of the skin of the feet. The fungus, called *tinea*, grows in the skin between and under the toes, especially the outer two little toes. Sometimes it spreads to the soles of the feet. It may also grow on the toenails, which become thickened and whitish-yellow. The same type of fungus may infect the skin of the groin, especially the scrotum in men. This condition is called 'jock itch'.



The area most commonly affected

What are the symptoms?

The most common symptoms are itchiness and foot odour. The skin becomes red, flaky and itchy. Sweat and water make the top layer of skin white and soggy.

How common is it?

Tinea pedis is very common, but many people do not find it troublesome enough to visit their doctor. Men are affected more than women.

Is it serious?

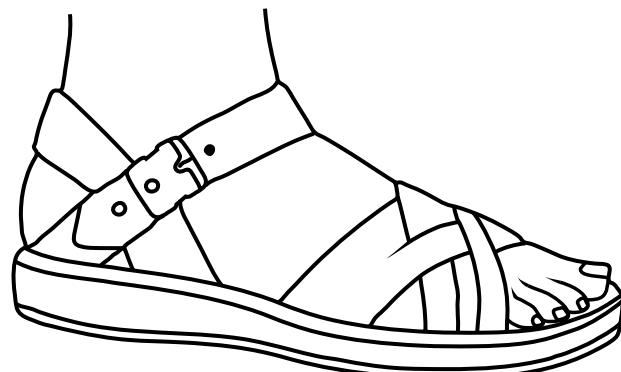
Tinea pedis is a harmless condition.

What is the treatment?

Self-help

- Keep your feet as clean and dry as possible.
- Carefully dry your feet after bathing and showering.

- Do not share towels.
- It is good to dry your feet with a hairdryer.
- After drying your feet, use an antifungal powder, especially between the toes.
- Remove flaky skin from beneath the toes each day with dry tissue paper or gauze.
- Wash your hands after touching your feet.
- Wear light socks made of natural absorbent fibres, such as cotton and wool, to allow better circulation of air and to reduce sweating. Avoid synthetic socks.
- Change your shoes and socks daily.
- If possible, wear open sandals or shoes with porous soles and uppers.
- Don't walk barefoot but keep your feet exposed to the sun if relaxing outdoors at home.
- Use thongs in public showers such as at swimming pools.



Wear well-ventilated sandals or open shoes to keep the feet dry

Medication

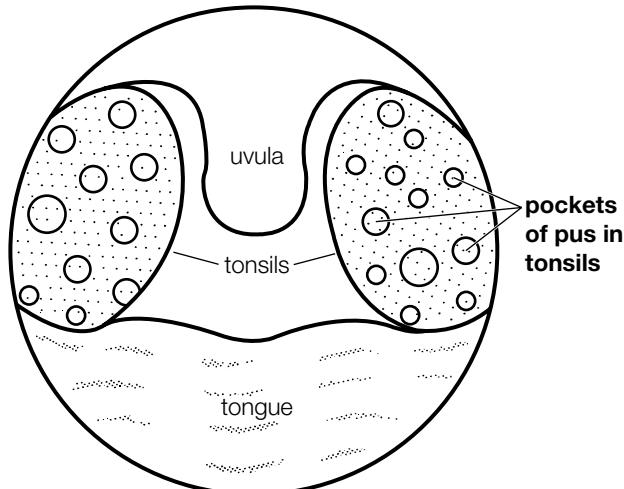
The old-fashioned remedies such as tea tree oil (*Melaleuca alternifolia*), Castellani's paint, Whitfield's ointment and tolnaftate are still useful for mild cases, but the best treatment is one of the antifungal creams or solutions such as clotrimazole, miconazole or terbinafine. These should be gently applied after drying, 2 or 3 times a day as directed for 2 to 3 weeks.

If the condition is severe and stubborn, your doctor may prescribe a course of tablets.

Tonsillitis

What are the tonsils?

The tonsils are two small, almond-shaped buds of soft lymph glands located at the back of the throat on opposite sides. They are part of the body's immune system and make antibodies and lymphocytes to fight germs invading the mouth.



View of the throat with the two tonsils

What is the cause of tonsillitis?

Viruses or bacteria (germs) break through the tonsils' defence and cause red, swollen, painful tonsils, often with pockets of yellow pus. The most common cause of tonsillitis is a viral infection. Tonsillitis may be a feature of glandular fever.

It is often associated with pharyngitis, which is infection of the throat.

What are the symptoms?

- Sore throat
- Pain on swallowing
- Fever
- Bad breath
- Swollen lymph glands under each side of jaw
- Lethargy
- Muscle aches
- White or yellow spots on tonsils
- Vomiting (sometimes)

Children may refuse to eat and often experience abdominal pain and may not complain of a sore throat.

Your doctor may do a throat swab and send it for laboratory testing to identify the responsible germ and what antibiotics (if any) will help.

What are the possible complications?

- Chronic or recurrent tonsillitis
- Spread of infection to nose, sinuses or ears
- A throat abscess called quinsy
- Rheumatic fever if Streptococcus infection is responsible and not treated adequately

What is the treatment?

Activity

Be as active as your energy permits, but rest if feeling unwell or feverish.

Diet

If your throat is very painful, confine yourself to fluids, including cool drinks, milkshakes and high-protein fluids. Sucking iceblocks is helpful. Avoid smoking, and very hot food and drink.

Medication

- Painkillers. Take paracetamol or ibuprofen for pain relief.
- Antibiotics. Penicillin is usually chosen, provided the patient is not allergic to it or does not have a viral infection such as glandular fever. Complete any course of antibiotics prescribed. In streptococcal tonsillitis the symptoms usually disappear after 2 days or so of treatment, but it is important to continue penicillin (or other prescribed antibiotic) for 10 days to eradicate the Streptococcus organism, which can cause rheumatic fever and glomerulonephritis of the kidney. However, many cases of tonsillitis are due to a virus and antibiotics are not needed.

What about tonsillectomy?

Doctors are reluctant to remove the tonsils because they play an important role in the body's fight against infection. Isolated attacks or large tonsils are not grounds for an operation. However, if the tonsils become a focus of chronic infection or if several severe attacks of tonsillitis occur in 1 year, removal may be required.

Tonsillitis in children

Most children experience attacks of tonsillitis during preschool and early school years, when the tonsils are normally large and defences against infection are not fully developed.

For most children, proper treatment of acute attacks is all that is required. The attacks will become less frequent as the child matures; tonsillectomy is advised only in exceptional circumstances.

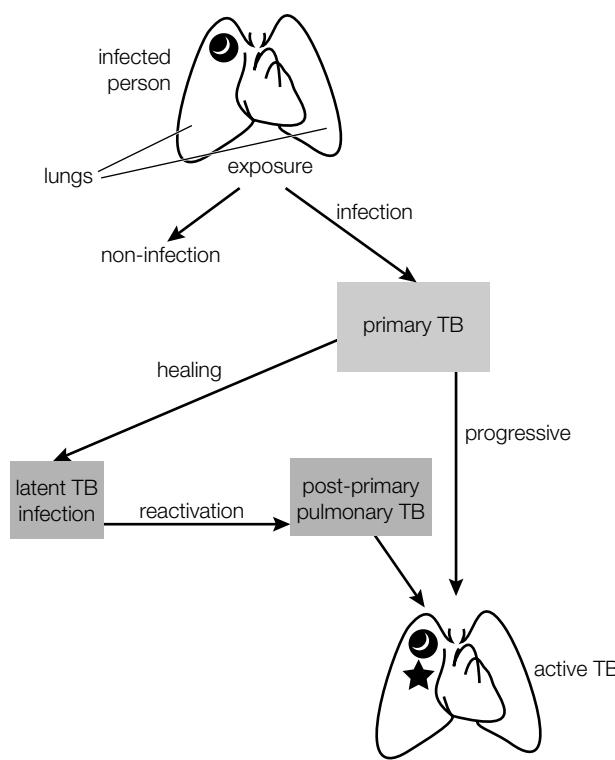
Tuberculosis

What is tuberculosis?

Tuberculosis, usually called TB, is a serious chronic infectious disease caused by a bacterial germ called *Mycobacterium tuberculosis*. It typically attacks the lungs but can spread to other parts of the body such as the kidney, bones and brain.

How does TB develop?

TB is usually transmitted through the air by coughing or sneezing from one person to another. Only a person with active TB of the lungs can pass it on. In most cases when a person is exposed to the infected person they do not contract the disease due to natural resistance, but in about 10 to 20% of people the infection takes hold in the lungs. This is called primary TB. This is more likely to occur in those with a weaker immune system. However, most of these people seal off the infection, which remains dormant in the lungs. About 10% of these can become active later.



The transmission of TB

Who is at risk?

- Newborn and infants
- Adults over 60 years
- HIV/AIDS patients
- Chronic illness (e.g. diabetes)
- Crowded or unsanitary living conditions
- People affected by alcohol and drugs
- Migrants and refugees from endemic countries

What are the symptoms?

- Early stage:
 - often no symptoms
 - flu-like illness
- Second stage:
 - unwellness
 - fatigue and tiredness
 - mild fever.
- Later stage:
 - weight loss
 - night sweats
 - persistent cough including blood
 - shortness of breath.

TB in children

Children catch TB from coughing adults with pulmonary TB. Some children may be completely well (asymptomatic)—this is called latent TB. However, some gradually become ill with active disease and have the symptoms of the second and later stages.

How common is the problem?

It is very common worldwide, especially in disadvantaged countries and those with HIV/AIDS infection. Although very uncommon 40–50 years ago in Australia, it is now an increasing problem in refugees and people at risk exposed to them. TB is responsible for about 3 million deaths each year in the world.

How can TB be prevented?

A healthy lifestyle with a good diet, exercise and outdoor living leading to a healthy body is a good start. There is a vaccine against TB called BCG that is given to people at high risk after a negative skin test. It is no longer given routinely.

What are the tests for TB?

A simple skin test—the tuberculin (Mantoux) test—is done to see if you require BCG vaccination (negative test) or may have been infected (strongly positive reaction). Follow-up diagnostic tests include a chest X-ray, a sputum test (to search for TB germs) and specialised blood tests.

What is the treatment?

Active TB disease can be treated under specialist care with a course of combined antibiotics, usually four at first for 2 months then two for 4 months. Sometimes the cure may take longer than 6 months. One problem is the emergence of multidrug-resistant TB and management requires careful supervision. Treatment is urgent because most untreated people die within 2 years. A healthy lifestyle based on rest is also fundamental to recovery.

Viral infection

What is a viral infection?

Viral infections are caused by viruses, which are microscopic germs that are quite different from the larger bacteria germs. They look like tiny crystals under the microscope. They are the most common cause of infection, but are usually not serious. We eventually get over the infection simply by resting and looking after any troublesome symptoms.

What are examples of viral infections?

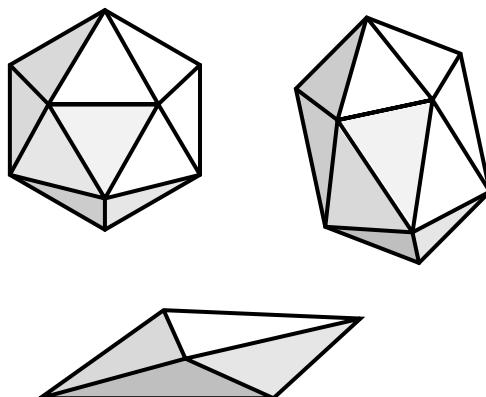
They usually cause upper respiratory tract infections (URTIs) such as the common cold and pharyngitis (sore throat). Other examples are influenza, gastroenteritis (especially in children), measles, rubella, mumps, chickenpox, glandular fever, shingles and cold sores. Deadly viruses include those causing encephalitis, haemorrhagic fevers (e.g. Ebola), rabies, AIDS, yellow fever, bird flu and SARS.

What are the typical features?

- The common viral illnesses are bothersome, but usually not serious.
- Symptoms include feeling unwell, fever, aches and pains (including headache).
- The illness is 'self-limiting'; that is, it gets better naturally.
- The body builds a defence by producing antiviral antibodies.
- Serious complications are rare, but dehydration can be a special problem in children and we have to watch out for encephalitis (inflammation of the brain) with some viruses (such as mumps and measles).

What is the treatment?

- Rest to allow the body to shake off the virus.
- Take analgesics (paracetamol, ibuprofen or aspirin) for fever and aches or pains. Give paracetamol, not aspirin, to children under 16 years.
- Take adequate fluids, especially children. Use clear fluids such as water.
- Use decongestants for URTIs.



Typical appearance of viruses magnified 115 000 times

Why not give antibiotics?

Routine antibiotics used to treat bacterial infections do not help viral infections and are usually not prescribed.

However, bacteria can attack the affected vulnerable parts of the body during a viral infection and cause problems such as middle-ear infection, sinusitis, bronchitis, pneumonia and skin infection. You or your doctor may notice a yellowish-green nasal discharge or sputum, or pus in the middle ear or throat. Antibiotics may be prescribed to treat this secondary bacterial infection.

Certain viral infections such as influenza, herpes, hepatitis B and C and HIV (the AIDS virus) can be treated with special antiviral antibiotics.

When should you contact your doctor?

Contact your doctor if any of the following occur:

- no improvement in condition or worsening after 48 hours
- refusal of a child to drink
- persistent vomiting
- difficulty in breathing
- persistent headache
- complaints that any light hurts the eyes
- neck stiffness
- paleness and drowsiness
- pain not relieved by analgesics
- pus-like discharge from the ear, nose or skin, or in the sputum.



The patient may feel miserable but the infection is usually short-lived!

What are warts?

Warts are lumps on the skin produced by the human papilloma virus, of which there are 100 different types. The virus invades the skin, usually through a small injury, and causes the skin cells to multiply rapidly. Wart viruses are spread by touch or by contact with the shed skin of a wart.

Common types

The common wart is a small, hard, flesh-coloured lump with a 'cauliflower' surface. It can grow anywhere on the body, but is most common on the hands, feet, face and knees. It is usually painless.

The plantar wart (papilloma) is a wart that grows on the sole of the foot and tends to become pushed in as you walk. It is usually painful, rather like walking with a stone in your shoe.

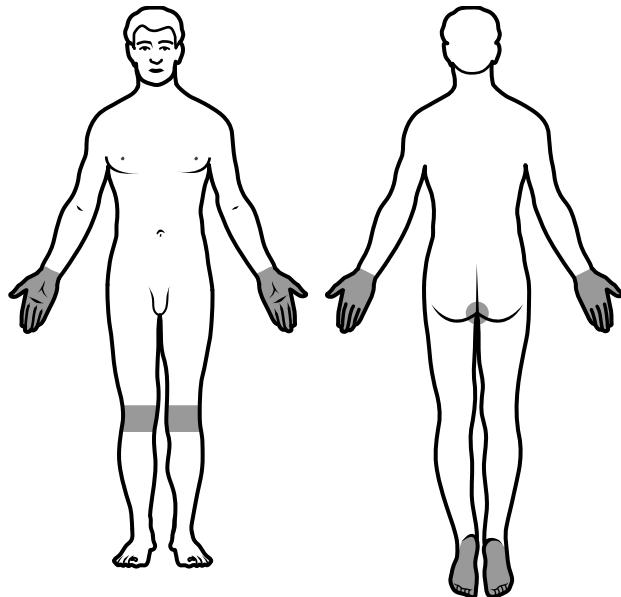
Anal warts and genital warts are usually spread sexually and tend to multiply very rapidly. They are caused by a different strain of wart virus.

How common is the problem?

Warts are common in children and teenagers but less common in adults. About 1 schoolchild in 5 has 1 or more warts, with those between 12 and 16 years being most commonly affected (up to 65% within 2 years).

Do warts disappear if left alone?

Yes—many warts will disappear, without any treatment, if left alone. However, plantar warts and anal/genital warts take longer, and it is advisable to contact your doctor about these warts. The wait-and-see approach is not recommended for severe wart infection or those present for more than 2 years.



Common sites for warts

What is the treatment?

The treatment of warts is slow to provide a cure, but a patient approach is usually rewarding. Regular application of one of the proprietary wart paints should suffice, for example salicylic acid plus lactic acid (both about 17% strength). Do not treat warts on your face and genitals with wart paint, because the skin on these areas is very sensitive. Anal and genital warts require special professional care.

Common warts

1. Soak the wart in warm, soapy water.
2. Rub back the surface of the top of the wart with a pumice stone.
3. Apply the prescribed paint or ointment, but only on the wart. It may be wise to protect the surrounding healthy skin with petroleum jelly (Vaseline).

Note:

- Carry out this treatment every day.
- Carefully remove the loose dead skin between applications.

Plantar warts

The wart is first shaved back (pared) by your doctor with a sterile blade (this should not be done at home). Then use the same steps as for common warts. The use of the pumice stone is very important. Your doctor should check progress in 6 weeks. It is usually a very slow process.

Other methods

Some warts remain stubborn and other methods can be used by your doctor. These include freezing with liquid nitrogen, electrocautery and the application of very strong pastes. Most warts eventually respond to treatment, leaving the skin free of a scar.

Warts: genital warts

What are genital warts?

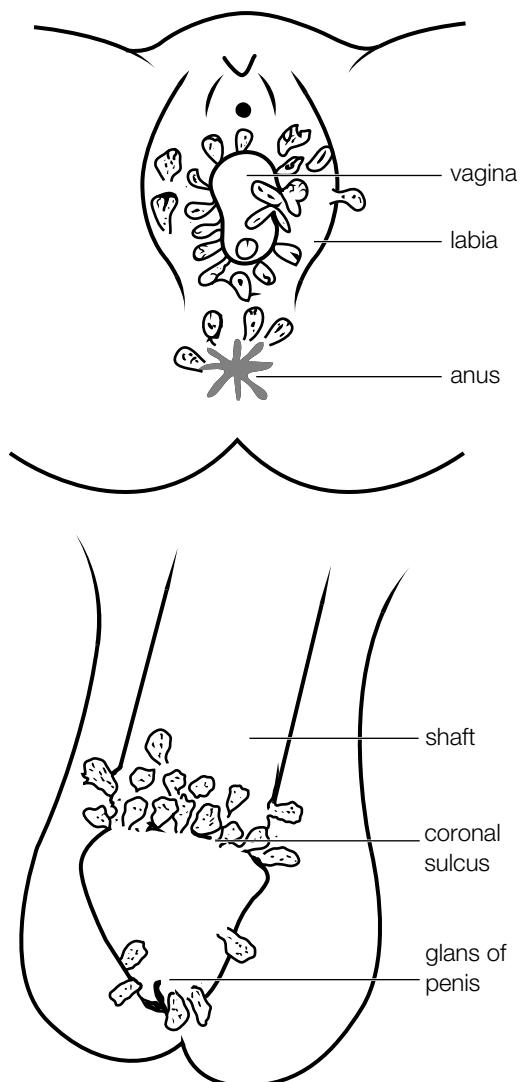
Genital warts (in the past sometimes called venereal warts) are soft clusters of thin frond-like warts that grow on and around the external genitals. They are more common in sexually active adolescents and adults. They are not the usual hard warts that we get on our hands and other body parts but are soft, thin, fleshy projections that grow in clusters rather like bunches of tiny grapes or cauliflowers.

What are the symptoms?

The lumps are found on the tip of the penis in men, on the vaginal opening in women and on the anus in both sexes. They do not usually cause irritating symptoms such as pain or itching.

What is the cause?

They are caused by some of the many varieties of human papilloma virus (HPV) that cause all types of warts. The infection is relatively easily spread from person to person through close human contact. It is usually spread through



Typical sites of genital warts

sexual activity and is one of the sexually transmitted infections (STIs).

However, not all cases are sexually transmitted; they may spread from warts on the fingers, especially onto a very moist vaginal area. The risk of infection increases with poor hygiene, crowded living conditions and poor nutrition. The risk increases with multiple sexual partners, the presence of other sexually transmitted infections (STIs) and not using condoms.

Do genital warts occur in children?

Yes, they do, but it is uncommon. If they are found, the possibility of sexual abuse must be considered.

What are the risks?

Although some types of papilloma virus are associated with cervical cancer in women, the virus that causes visible genital warts is different and is not considered to be a strong risk factor for cervical cancer. Regular PAP smears (of the cervix) should be taken as usual by your doctor. Condoms and other barrier methods of contraception do not always give full protection. Your doctor may check for other STIs as these are often associated with genital warts.

How can spread be prevented?

Genital warts are very contagious, so avoid sexual activity until all the warts heal completely; then use condoms during sexual intercourse. It is important not to scratch the warts and to practise good hygiene by keeping the genital area well washed and dry. Sexual partners should be informed by you, checked by their doctor and perhaps referred to a specialist clinic.

What is the treatment?

Genital warts usually eventually disappear, even with no treatment. However, they can be distressing and may need to be treated. The treatment varies according to the size and proportion of the warts and what best suits the person who has them. Warts may be removed by chemical or physical means (e.g. electrocautery or liquid nitrogen). The simplest treatment for small numbers of warts is podophyllotoxin paint, which is usually applied 2 times a week by your doctor. A newer but more expensive chemical agent that works through the immune system is imiquimod cream, applied 3 times a week for as long as advised by your doctor.

Despite adequate treatment, it is common for genital warts to recur, but they can be retreated.

People with genital warts need good counselling and support for this embarrassing problem; thus it is vital to talk through the problem and discuss your feelings with your doctor. Follow-up visits are important.

Genital warts can be prevented by HPV vaccines, which are recommended for males and females aged 9 onwards.

Whooping cough (pertussis)

What is whooping cough?

Whooping cough, also called pertussis, is a highly contagious disease that mainly affects the lungs. The Chinese call it ‘the 100-day cough’.

What is the cause of whooping cough?

It is caused by a specific bacterium called *Bordetella pertussis* which infects the lungs, causing the airways (bronchial tubes) to become clogged with thick mucus. It is spread through air droplets by coughing and sneezing and also by close direct contact with an infected person.

Who gets whooping cough?

People of all ages can catch it but it is most common in children, especially in infants under 2 years of age. Older people can get it because their immunity wanes as they age.

How common is whooping cough?

It is a very common infection in those people who are not immunised and in countries that do not have an immunisation program. About 80% of unimmunised children develop it—usually by their fifth birthday. It is uncommon in immunised people.

What are the symptoms?

Slightly different symptoms are seen in three distinct stages. Stage 1: The catarrhal or runny nose stage. The early symptoms are similar to a common cold with a runny nose, watery eyes, slight fever and a dry cough. It lasts about 1 to 2 weeks and then, unlike an ordinary cold, the symptoms get worse.

Stage 2: The paroxysmal cough stage. This is where the cough comes in bursts (paroxysms) and becomes more severe until it occurs continuously in bouts of up to a minute. At the end of each coughing bout the affected person may make a ‘whooping’ noise as they gasp for breath. Because the person cannot breathe in during this bout their face may go deep red or blue from lack of oxygen (called apnoea). Vomiting often occurs at the end of a coughing bout. This stage lasts for an average of 4 weeks.

Stage 3: The recovery stage. The vomiting and coughing become less severe and less frequent. The cough can persist for several months.

What is vaccine-modified whooping cough?

Children who have been immunised, particularly if not fully immunised, can still get the infection but have a milder form. They may still make the familiar whooping sound. They can cough for several weeks.

What are the risks?

Whooping cough can be dangerous, especially in babies less than 6 months of age. The younger the child, the greater the risk.

Complications include:

- pneumonia with possible damage to lung tissue
- cerebral haemorrhage from coughing
- inflammation of the brain (encephalitis)
- choking and apnoea.

How is it diagnosed?

Doctors can diagnose it by the symptoms, especially the nature of the cough. It can be confirmed by blood tests and examining swabs taken from the nose or throat.

What is the treatment?

The treatment depends on the severity of the symptoms.

General measures

- It is usual to be cared for at home.
- Give ample fluids and nutritious food.
- Good ventilation in the home is helpful.
- Avoid emotional excitement, smoke and dust.
- Cough medicines are not recommended—they do not seem to help.

Antibiotics

A 7-day course of antibiotics is usually given to help reduce the spread of the infection. However, they do not improve or cure the patient. Antibiotics are generally not recommended if the cough has been present for more than 3 weeks.

Hospitalisation

As a rule, infants less than 6 months, and also older children with a more severe illness, are admitted to hospital because of the dangers of apnoea and choking.

School exclusion

School exclusion is necessary until at least 5 days of antibiotic use.

How is whooping cough prevented?

This is best done by immunisation. In Australia the recommended routine schedule is by pertussis vaccination (combined with tetanus and diphtheria) at 2, 4 and 6 months with boosters at 4 years and 15 to 17 years.

The vaccine, including the new vaccine for adults, is safe but may have minor side effects such as soreness at the injection site and fever.

For close contacts of an infected person, a 7-day course of antibiotics is recommended, regardless of immunisation status. It should be commenced within 3 weeks of the onset of the cough.

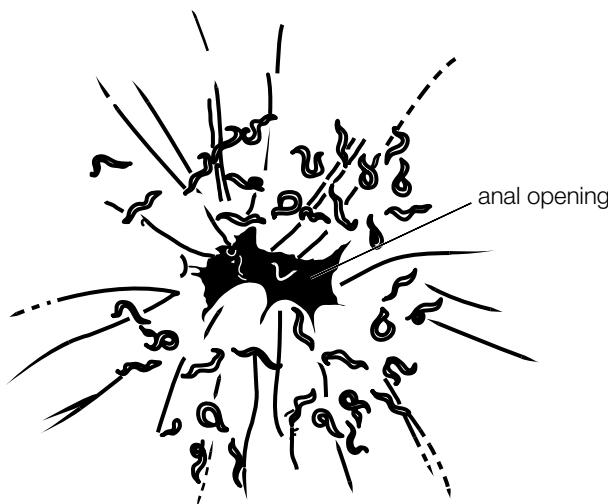
Worm infestation is still reasonably common, especially in tropical or subtropical communities. There are various types of worms, including the common pinworm (also called threadworms or enterobiasis), roundworm (these can be very large), hookworm and whipworm. The treatment for each of these worms is almost identical. This leaflet will focus on pinworms.

Pinworms

Pinworms are tiny white worms about 1 cm long. They are more common in children, especially school children, although they can infect adults. The host of these worms is humans and they are spread from human to human. There is no evidence that they are picked up from family pets. They are spread by children scratching their bottom and carrying the worms back to their mouth. They can be spread indirectly in food, dust and other articles.

Life cycle of pinworms

Pinworms enter the gut as eggs in contaminated food or sometimes through bare skin in contact with contaminated soil. The eggs hatch in the intestine and about 2 weeks later the female worm lays eggs around the anus of the person. These eggs then hatch into the tiny worms. The eggs or worms cause irritation of the anus and the itching provokes scratching, often subconsciously at night. The child thus picks up some eggs on the fingers. Sucking the finger or eating food with unwashed hands will then cause reinfection. The child may pass on the worms to other members of the family by contaminating food, sheets and towels.



Appearance of pinworms around the anus

What are the symptoms and how are they diagnosed?

Pinworms do not generally cause ill-health. The typical symptom is anal itching but in many cases there are no symptoms. Other possible symptoms include anorexia (reduced appetite), feeling mildly unwell, irritability and vaginal itch. The diagnosis is usually made by observing the tiny worms (they look like small white threads) around the anus at night when the female worms come out to lay eggs. Inspection is best done with a torch about 1 hour after the person has gone to sleep. The worms may be seen in the faeces. The most effective diagnosis is made by having samples of worms or their eggs inspected in a pathology laboratory. The eggs are collected by placing adhesive tape on the skin around the anus first thing in the morning.

What is the treatment?

Self-help

- Scrupulous hygiene by the whole family is the key to solving this problem.
- The hands should be thoroughly washed with warm soapy water after going to the toilet, after handling a pet and before touching any food.
- Fingernails should be clipped short, as eggs tend to lodge under nails.
- Children should wear pyjamas rather than nightgowns.
- The patient should shower each morning.
- Bed linen (sheets and pillowcases), nightwear, underwear and soft toys should be changed and washed in very hot water daily for several days.
- Rooms used by the affected person or persons should be vacuumed daily to remove the eggs.
- Clean the toilet seat regularly with disinfectant.
- Discourage children from eating food that has fallen on the floor.

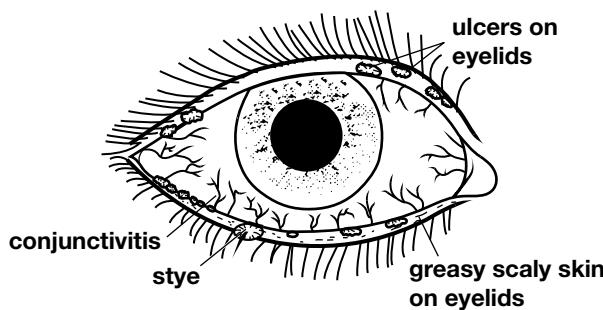
Medical help

The affected person should take one of the commonly used drugs such as pyrantel, albendazole or mebendazole, usually as a single dose. It should be repeated after 2 to 3 weeks. If this treatment is not successful, all members of the family should be treated, even though they have not been diagnosed as having worms. An ointment may be prescribed to relieve anal irritation.

Blepharitis

What is blepharitis?

Blepharitis is chronic inflammation of the margins of the eyelids. It can involve the eyelids, eyelashes, conjunctiva (whites of the eye) and the meibomian glands (those that lubricate the eye).



What are the symptoms and signs?

Generally there is a persistent and unsightly redness and scaliness of the skin on and around the eyelid margins. Other problems may include:

- persistent soreness of the eyelids or eyes
- greasy appearance of the eyelid margins
- flakes of skin, like dandruff
- eyelashes that fall out
- small ulcers on the eyelid
- crusting and bleeding (if severe)
- irritation of the eye (from flakes)
- sensation of 'something in the eye'
- grittiness, burning, itching and dryness
- discharge from the lids, causing lashes to glue together during sleep
- sensitivity to light
- swelling of the eyelids and conjunctiva.

What are the three main causes or types?

- Seborrhoeic blepharitis: associated with seborrhoeic dermatitis
- Rosacea blepharitis: associated with rosacea of face
- Staphylococcus blepharitis: due to infection with the bacterium *Staphylococcus aureus*

What are the complications of blepharitis?

Apart from infection with *Staphylococcus* any of the following can occur:

- styes (infection of an eyelash)
- meibomian cyst infection
- conjunctivitis
- ulceration of the conjunctiva (white of eye) or cornea (clear covering of eye)
- loss of eyelashes
- scarring of eyelids
- misdirected eyelash growth (e.g. inwards).

What is the expected outcome?

Blepharitis is a chronic inflammation that is stubbornly resistant to treatment. It can be controlled and sometimes cured in about 6 to 12 months but tends to recur.

What is the treatment?

- Eyelid hygiene is the key to successful treatment. The crusts and other debris on the eyelids should be gently cleaned with a cotton bud dipped in clean, warm water, a weak solution of sodium bicarbonate (baking soda) or a 1 in 10 dilution of baby shampoo. This should be done once or twice daily depending on the severity. An alternative is to apply a warm water or saline soak with gauze for 20 minutes followed by a rest for 60 minutes before bathing the eyelids again.
- Control scalp seborrhoea with antidandruff shampoo (e.g. Head & Shoulders shampoo).
- Eye lubricants such as artificial tear preparation will relieve the symptoms of dry eyes.
- Avoid wearing eye makeup while inflammation is present.
- Discontinue wearing contact lenses until the condition has cleared.

Medication

- Short-term use of a cortisone eye ointment applied to the margins after washing will give relief.
- Antibiotic ointment should be smeared on the lid margin regularly if infection is present.
- Your doctor may prescribe a combined cortisone and antibiotic ointment.
- Oral antibiotics may be prescribed in the presence of lid abscess or associated rosacea.

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Bloodshot eye

What is a bloodshot eye?

A bloodshot eye appears very red as though there is blood on the surface of the eye. It can occur with conditions such as an infection of the eye tissues, trauma from a blow to the eye or from a subconjunctival haemorrhage (SCH), which is the most common and prominent cause.

What is a subconjunctival haemorrhage (SCH)?

It is a small bleed (haemorrhage) on the outside of the eye. The conjunctiva is like a thin clear skin, similar to plastic wrap, on the front of the eyeball. It covers the white part of the eye (the sclera) and the inside of the eyelids but does not cover the central part (the cornea). There are tiny blood vessels between the conjunctiva and the sclera and, if one of these vessels bursts, it bleeds between the conjunctiva and the sclera. This bleed is called a subconjunctival haemorrhage: 'sub' means 'beneath'.

What are the symptoms and signs of an SCH?

There are usually no symptoms. The obvious sign is the small collection of dark red blood over the white of the eye. It is painless, does not itch, and does not affect eyesight or cause a problem with your health. You often do not notice it until someone points it out to you. You may notice a slight swelling in the affected area.

What causes an SCH?

In most cases there is no known cause—the bleed just happens to be 'out of the blue'. It is a fact that blood vessels around the eye are rather thin and fragile and can bleed easily, especially in elderly people. It can be caused by a minor injury to the eye such as an object being poked into it. It may occur as a result of a sudden increase in pressure in the eye that can occur with coughing, sneezing or vomiting. It is seen commonly in people with whooping cough. People on blood-thinning drugs (anticoagulants) are also at an increased risk of a bleed.

What are the risks of SCH?

Although the appearance of an SCH can be rather alarming, it is not a serious problem. Your doctor can confirm the diagnosis. If you have what looks like an SCH after a severe head injury, it may be another condition that needs careful medical assessment.

What is the outcome of SCH?

The blood will absorb gradually over the next 2 to 3 weeks. The colour will slowly change from beefy red to brown, yellow or green before disappearing. There are no complications.

Is SCH caused by high blood pressure (hypertension)?

It is very unusual to find hypertension in people who have an SCH. It usually occurs in people with normal blood pressure, but rarely it may be related to hypertension. Your doctor will usually check your blood pressure mainly to reassure you.

Can a bleeding disorder cause SCH?

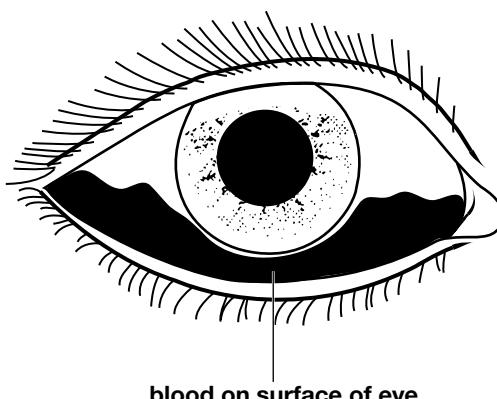
Yes, occasionally SCH is caused by a generalised bleeding disorder such as haemophilia, just as haemophilia can cause easy bruising. If your doctor suspects this blood tests will be arranged.

What is the treatment of SCH?

There is no special treatment. Eye drops and medicines are not helpful. Warm compresses do not help or hasten the healing but do no harm. The problem is best left to natural healing.

Inform your doctor if you:

- have not had your blood pressure checked recently
- suspect injury is a cause (e.g. a flying bit of metal from a chisel or hammer)
- have noticed any other unusual bleeding or bruising in your body.

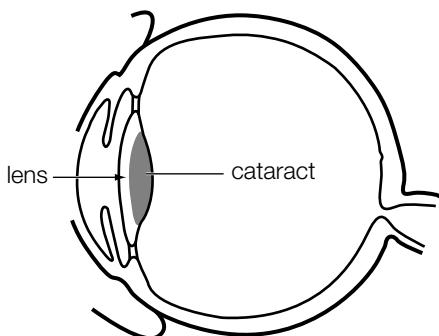


Subconjunctival haemorrhage

Cataracts

What is a cataract?

A cataract is a small patch of cloudiness or opaqueness that develops in the usually clear lens of the eye. The human lens, which is a small, convex, glass-like object in the front of the eye, normally allows light to pass through it to focus it onto the back of the eye (rather like a magnifying glass). When a cataract is present, light cannot pass readily through the affected lens and thus vision is distorted. A cataract can form in one or in both eyes, not necessarily at the same time. Cataracts are NOT a form of cancer. Ancient people coined the name because a cataract is a waterfall over a steep surface and people with cataracts perceive that their vision is obscured by water, like looking through a window covered in rain.



What are the symptoms?

The symptoms depend on the size and the site of the opacity in the lens. The only significant symptom is poor vision.

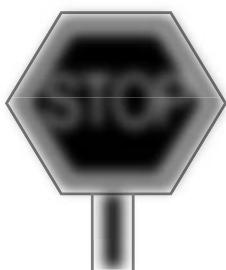
Typical complaints are:

- reading difficulty
- blurred vision
- difficulty in recognising faces
- difficulty with television viewing
- problems with driving, especially at night-time
- reduced ability to see in bright light
- seeing haloes around lights.

Cataracts usually develop slowly and people may not realise that their vision is deteriorating in the early stages. In some people vision is only affected mildly. There is NO pain or discomfort, redness, itching or watering of the eye.



normal vision



typical blurred vision with an advancing cataract

What causes cataracts?

Advancing age is the most common cause. Long exposure to ultraviolet (UV) light from the sun will accelerate development of cataracts.

They are more likely to develop with:

- diabetes
- eye disease
- past eye injury
- cortisone (topical or oral).

Cataracts are not caused by eye strain or reading in bad light.

Who gets a cataract?

A cataract can occur at any age but most are found in the elderly. If anyone lives long enough they will develop a cataract; 65% of people in their 50s and all people over 80 years have some degree of cataract. The sexes are equally affected. Cataracts also run in families.

How are cataracts diagnosed?

They are diagnosed during an eye examination. Eye specialists are able to pinpoint the exact degree and site of the cataract.

What is the treatment?

There is no effective, simple treatment, including with drugs or herbs. Sometimes a new prescription for glasses can help people cope. Surgery is the only effective cure and while it is a delicate operation it is safe and effective with very good results in over 95% of cases.

Prevention

Sunglasses, particularly those that wrap around and filter UV light, may offer protection against the formation of cataracts.

When should a cataract be removed?

A cataract does not have to be removed just because it is there. It should be removed when the person cannot cope comfortably and it interferes with their life. Age is no barrier to surgery, whether young or old.

What does surgical removal involve?

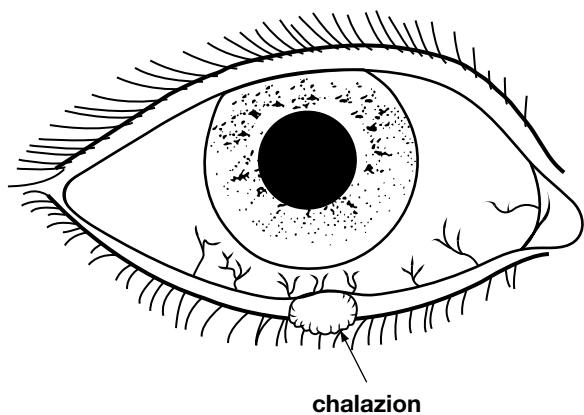
It usually involves a day-surgery procedure, which is a stay of 4 to 5 hours. It can be performed under local or general anaesthetic and this can be discussed with your surgeon. It is a delicate procedure and does not hurt. Very fine instruments are used to make a small incision in the front of the eye and extract the old cataract-containing lens. It is replaced by a plastic lens in the space left by the old lens. The new artificial one will last forever.

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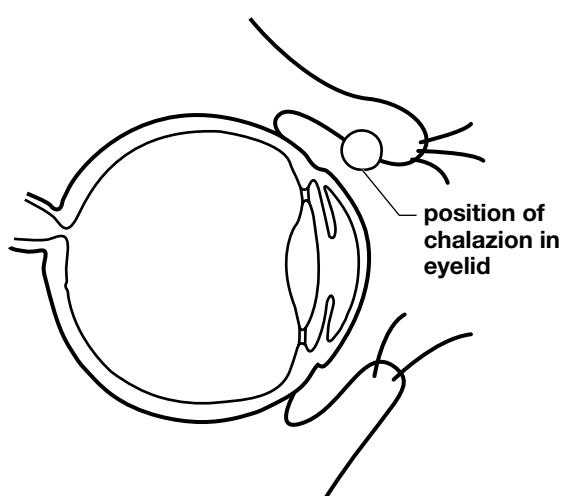
Chalazion (meibomian cyst)

What is a chalazion?

A chalazion, sometimes called a meibomian cyst or tarsal cyst, is a small, painless cyst in the eyelid. The cyst, which is filled with an oily fluid-like material, is usually on the margin of the lid.



Front view



Cross-section view

What is the cause of a chalazion?

It is caused by blockage of one of the small meibomian glands, which are situated just under the surface of the inner eyelid. These glands produce an oily fluid that lubricates the eyelids. If the opening of the gland gets blocked, the fluid cannot escape and then gradually swells into a cyst.

What are the symptoms?

- Lump—the main feature is the presence of a small lump on the eyelid, which can look unsightly
- Irritation with the sensation of 'something' in the eye
- Mild pain in the eye
- Blocking of vision—eyesight is not usually affected although a large cyst may block a small area of the field of vision

What is the risk?

A chalazion is a minor condition and usually causes no problems but it can become infected. An infected cyst will become more red, swollen and painful. It may disappear as the cyst ruptures of its own accord and the pus drains away. Otherwise a small incision will be required to release the pus.

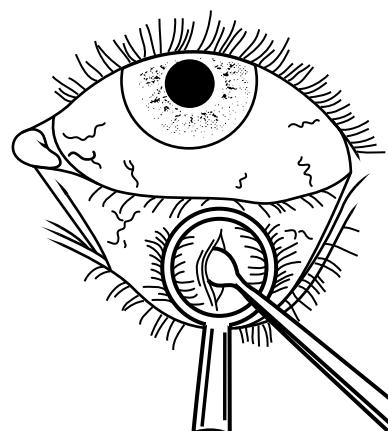
What is the treatment?

There are a number of treatment options.

- Leave alone. Small chalazions often disappear in a few months. This can be assisted by gently massaging the eyelid towards its margin with your finger. The massage can help empty the cyst of the blocked-up material
- Steaming the eyelid. This can be performed by directing the steam from hot water (left for about 5 to 10 minutes after boiling) in a thermos onto the closed eye for 10 to 15 minutes (take care to avoid burns). This method can be combined with massage.
- Hot compress method. Soak a hand towel or similar cloth in hot water (not too hot) and press it firmly but gently against the closed eye for several minutes. The warmth and slight pressure may be sufficient to allow drainage of the cyst. This method relieves irritation and may lead to a cure.
- Puncturing the cyst. It may be possible to carefully open the cyst from the inside of the eyelid by the use of a sterile needle. Your doctor may do this; do not try it yourself. Once drainage is established the cyst may disappear. Follow up with hot compresses and massage.
- Minor surgery. Larger cysts can grow to the size of a large pea and cause irritating symptoms. An operation can be performed under local anaesthetic to make a small incision on the inside of the eyelid to drain away the contents, followed by scraping out the cyst.
- Antibiotic ointment. Your doctor will prescribe ointment if the cyst shows signs of infection.

Do the cysts come back?

As a general rule a chalazion is a once-off condition. However, in some people it can recur or others may develop. This problem may be prevented by using the hot compress and massage method each morning under the shower.



Excision of chalazion

Colour blindness

What is colour blindness?

Colour blindness is the popular but incorrect term for the very common condition of being unable to distinguish between certain colours. It means that a person cannot see or distinguish some colours, or sees them differently from other people. In fact literal or total colour blindness, which is seeing everything in shades of grey, is extremely rare. Very few people who are colour blind are blind to all colours. The usual situation is partial colour blindness, where people have difficulty distinguishing between reds and greens or between blue and yellow, especially in dim light.

It was first explained by the scientist, John Dalton (who had the condition), and hence it is referred to as 'Daltonism'. However, in a politically correct world we should use the term 'chromatically challenged'.

What are the symptoms?

At first parents may notice that children have difficulty recognising and identifying different colours beyond the age of around 4 years. They have an inability to separate items by their colour. Those with the condition have difficulty with the colours green, yellow, orange and red. They are prone to difficulty seeing in low light, especially between reds and greens, hence the label 'night blindness'. In clear light, the colours are usually seen normally and people may be unaware that they have a defect unless tested for colour vision. It must be emphasised that there are varying degrees of disability.

Who gets colour blindness?

It is an inherited disorder, especially red-green colour blindness, which is transmitted in the male X chromosome. It occurs in 1 in 20 males but only 1 in about 300 females is affected. A girl will not normally be colour blind unless her mother is a carrier of an affected X chromosome and her father is colour blind.

What causes colour blindness?

Cells in the retina of the eye called cones contain a light-sensitive substance that responds to the colours red, green and blue in the light rays entering the eye. The cone cells react to brighter light and help us to see detail in objects. In people with defects in colour vision, there is a partial or complete lack of one or more of these substances in the cones.

How is colour blindness diagnosed?

Doctors and optometrists can test colour vision using specially designed charts, one of which is the Ishihara colour test. It is recommended that all children, especially boys, have a routine colour vision test in the early years of school, particularly if they develop a learning difficulty.

What are the implications of colour blindness?

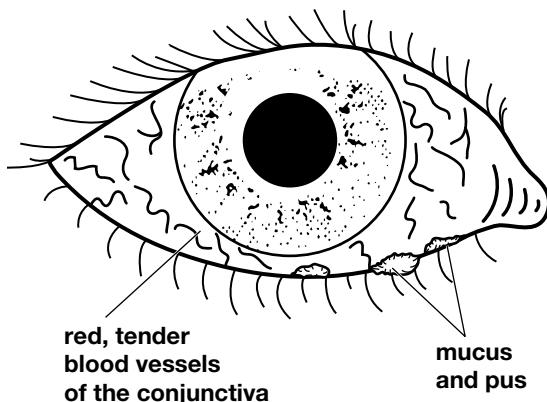
There is no cure or specific treatment, however it is a condition that does not interfere seriously with daily life. People with the condition are usually aware of it and have learned how to deal with it. An example is that the red and green on traffic lights are distinguished by their position. In some countries, the authorities are proactive by arranging the traffic lights horizontally with the three colours having different shapes. Many people with red-green colour blindness will be able to get a car licence, but not qualify for a commercial driver's licence or they may be subject to restrictions such that they cannot drive at night.

Certain occupations such as airline pilots demand normal colour vision. Others, including electricians who have to work with colour-coded wiring and warning lights, are subject to restrictions.

Conjunctivitis

What is conjunctivitis?

Conjunctivitis is an inflammation of the conjunctiva, which is a thin, clear tissue that lines the eyelids and the eyeball, except the cornea. It is very common, especially in children under 5 years.



What causes conjunctivitis?

- Bacterial infection
- Viral infection
- Allergies such as hay fever

Bacterial infections are common; the bugs are usually picked up from contaminated fingers, face cloths and towels. They are more likely to occur when you are run down, such as with a heavy cold, and when the tear ducts are blocked with a respiratory infection.

What are the symptoms?

Bacterial infection (usually both eyes)

- Whites of the eyes red and sore
- Yellow pus discharging from the eyes, making them sticky
- During sleep, this matter causes the eyelids to stick together so that they have to be prised open upon waking

Viral infection

- A painful red eye
- Slight discharge only

Viral conjunctivitis, which is also associated with upper respiratory infections, is the conjunctivitis that usually occurs in epidemics (known as 'pink eye'). It usually lasts 2 to 3 weeks

and can be very contagious, so care needs to be taken not to infect others.

Allergic conjunctivitis

- Itchiness and redness of the whites of the eyes
- A gritty feeling in the eyes
- No discharge

A feeling of irritation and watering may be found with all three types.

Symptoms last as long as the exposure continues to the irritant that is causing the allergy.

What is the treatment?

It is important to visit your doctor for care. Sometimes the cause is a foreign body, such as a piece of metal or a piece of an insect or another speck that has entered your eye without your being aware of it.

Your doctor may prescribe antibiotic or anti-allergy drops or ointment, which you place in the eye as directed. The infection usually responds rapidly to treatment within 48 hours. If not, inform your doctor, especially if your vision becomes blurred.

Other points

- Avoid touching your eyes directly.
- Wash your hands regularly.
- Do not use makeup.
- Gently wipe any discharge with disposable tissues.

Eye bathing with salt water

Antibiotics will not work if there is discharge still in your eyes, and so it is vital to wash away this debris with a weak, salty solution. It is preferable to have this warm. The solution can be made by dissolving 1 teaspoon of salt in half a litre (500 mL) of boiled water that has cooled to lukewarm. Use this solution before instilling eye drops.

Another method is to add a pinch of salt to an eyebath of lukewarm water. Apply the eyebath closely to the rim of the eye, look upwards and blink the eye, which will then be irrigated by the solution.

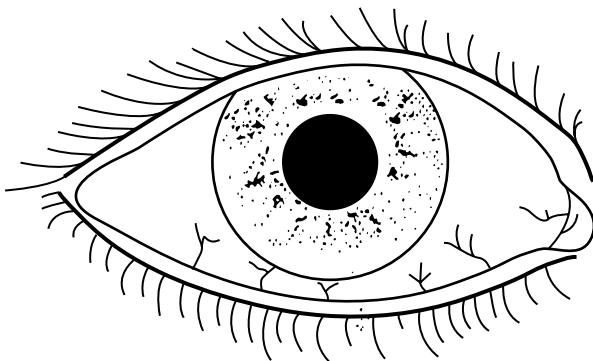
Exclusion from school and childcare

Infective conjunctivitis is highly infectious, so children should not attend child care, kindergarten or school as long as they have eye discharge.

Dry eyes

What causes dry eyes?

Dry eyes is a common condition that is caused by the reduced production of tears from the lacrimal glands (tear glands) of the eye. Tears lubricate and protect the eyes. Some people are prone to get dry eyes in a similar way that others get dry skin. There is a tendency to produce fewer tears as we get older.



Red, dry, irritated and stinging eye

Other conditions that can cause dry eyes include:

- rheumatic disorders (e.g. rheumatoid arthritis, Sjögren's syndrome)
- the menopause
- certain drugs, especially beta-blockers
- cold draughts, wind, adverse weather and air-conditioning
- prolonged periods in front of computers.

Who gets dry eyes?

It is most common in the elderly and usually comes on in middle age, especially in women as a feature of the menopause. However, it can occur in adolescents and even in children. People with large eyes are prone to get dry eyes from exposure to windy, hot or cold weather and also to air-conditioning.

What are the symptoms?

Apart from the feeling of dryness, other symptoms include:

- burning or stinging
- itching, especially in the corners of the eye
- irritation—a scratchy or gritty sensation
- tired eyes
- redness, such as bloodshot eyes
- a sensation of something in the eye
- discharge of mucus.

People with redness and discharge can be misdiagnosed as having infective conjunctivitis. Sleep tends to bring on dryness because of rapid eye movements during sleep. People with a tendency to dry eyes often wake up with a burning dry sensation. They also find it difficult to wear contact lenses.

What simple test can demonstrate dryness?

Hold the eyelids wide apart for about 20 seconds. This will reproduce symptoms such as burning, stinging or dryness.

What is the risk?

There is usually no serious risk, especially to eyesight. People can suffer from blepharitis, which is inflammation of the eyelids. Early diagnosis and treatment is important. It is also important to seek medical attention if you develop an unusually red eye, a painful eye or disturbance of vision.

What is the treatment?

There is no cure. For uncomplicated dry eyes, it is usual to use artificial tear preparations to relieve the symptoms. In some people these may be needed for life. There are three main types of preparations:

- lubricating drops—these are instilled during the day, usually 1–2 drops about 4 times a day or as often as required. Examples include Liquifilm, Teardrops, Murine Tears, Minims Artificial Tears, Isopto Tears, Tears Naturale, Methopt.
- lubricating gels or ointments—these are instilled at bedtime. Examples include Poly Visc, Duratears, Lacri-Lube S.O.P.
- tear-stimulating drops—these are given in the same way as lubricating drops and are very effective. Examples include Theratears, Cellufresh.

Bathing the eyes with clean water will also help dry eyes. Frequent blinking is also recommended. Room humidifiers help in rooms where there is dry heating.

Method of instilling drops

Lie down or sit with your head over the back of a lounge chair. Look up, hold the lower eyelid down and instil one drop into the lower outer corner (make sure that the tip of the dropper is not contaminated by touching part of the eye or your finger). Then close the eye and apply pressure with your finger over the inner lower lid to stop quick drainage.

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Floater s and flashes

Floater s and flashes, which usually occur together, are abnormal visual sensations that appear in our line of vision. As a rule they are not serious, just a nuisance.

What are floater s?

Floater s are small black shapes that appear to float around in our field of vision. They appear as regular round or oval dots or spots or fuzzy lines resembling scribbling, and are often described as being like mosquitoes or cobwebs with spiders. Floater s are more noticeable against a clear background such as a sheet of white paper, a pale wall or a clear blue sky.

People with the problem may feel that there are insects or bits of dirt on the white sheets and may be seen trying to brush them away.

What are flashes?

Flashes appear as rapid flashes of white lights usually seen at night or in poor light such as a dark passage or bedroom. They are especially obvious when one wakes during the night. Flashes usually last for only a few seconds but can last for minutes. They can occur on and off for weeks, months or even years.

What is the cause of floater s and flashes?

The inside of the eye is filled with a jelly-like substance called vitreous gel, which tends to move around and expand or shrink. In so doing the gel tugs on the light-sensitive membrane at the back of the eye, called the retina. When the gel pulls on the retina we see flashes of light. When the gel forms small clumps that float around we experience floater s.

Who gets floater s and flashes?

These can occur as part of the ageing process and are common in people over 55 years of age. It is more common in people who are short-sighted and who have undergone eye operations, such as removal of cataracts.

What is the outcome?

Floater s and flashes usually improve with time and gradually disappear, sometimes in a few months, although some floater s persist for many years.

What is the risk?

If the shrinking vitreous gel separates from the retina it is known as posterior vitreous detachment, which occurs in at least half of the population. In this process floater s and flashes are seen. However, sometimes the gel is more firmly attached to the retina and pulls away a piece of it as it shrinks. This is called a retinal tear. This tends to cause a small bleed resulting in a 'shower' of new floater s.

When a retinal tear occurs, fluid can escape and push the retina off the back wall of the eye. This is known as a retinal detachment, which is a serious problem as it can lead to partial or full blindness.

What are the danger signs?

If the floater s remain constant there is little to worry about. However, if there is a sudden bout of fresh flashing lights together with a new shower of floater s the retina needs to be checked.

What should be done?

If you experience flashes and floater s, it is important to have the eye checked by a specialist. The pupil is dilated with drops and the retina is checked to ensure that there is no tear in the retina that is likely to progress to a retinal detachment. However, it is usual to find nothing of major concern and you can be reassured that 'nature' will heal the problem in time.

The eyes do not need to be rechecked for 12 months unless fresh floater s and flashes develop.

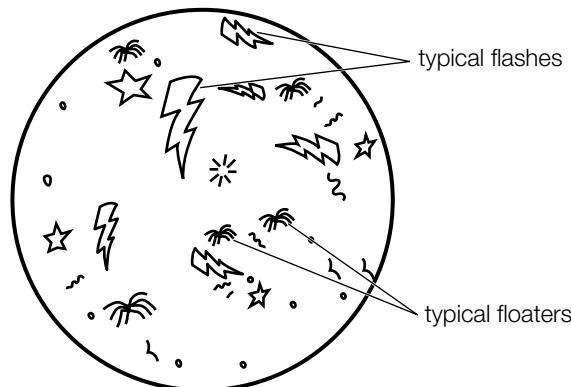
Rules

- Report the appearance of a fresh lot of flashes and particularly floater s.
- People who have occasional floater s and flashes should have an annual eye examination.

What is the treatment?

Treatment is not necessary for most people. Wearing sunglasses, especially for driving, is helpful.

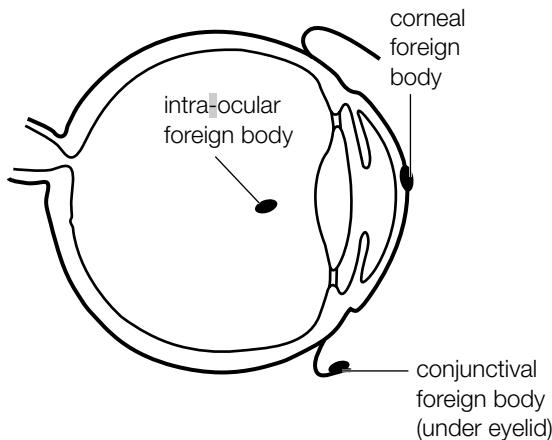
- Treatment of floater s. In the unusual circumstances of large and persistent floater s affecting vision and causing major problems with driving, reading and writing, the floater s can be removed by a minor operation called vitrectomy.
- Treatment of a retinal tear. Retinal tears are mainly treated with laser therapy.



Foreign body in the eye

What is a foreign body in the eye?

Any particle such as dirt, metal or sawdust that lodges on the surface of the eye or inside the eye is a foreign body. The main causes are dust carried by wind, metal fragments from grinding, and wood particles from drilling or cutting.



What are the different types of foreign body?

- A corneal foreign body is one on the clear surface of the eye.
- A conjunctival foreign body is one on the skin of the eye, especially under the eyelids.
- An intraocular foreign body is one that is inside the eye (a very serious problem).

What are the symptoms?

The main symptoms are eye pain or discomfort, watery eye, blurred vision, redness in the white of the eye and sensitivity to bright light. These may occur straightaway or, more commonly, after about 8 hours. The symptoms are usually worse for an intra-ocular foreign body, but can be surprisingly mild at first. If you are in doubt, it is better to err on the side of safety and go to your doctor.

Who gets foreign bodies in the eye?

Anyone can, although it tends to be most common in young adults. Those at most risk are tradespeople such as boilermakers, woodcutters, fitters and turners, and labourers.

What are the dangers?

The biggest danger is an intra-ocular foreign body, which can be missed if not suspected. It is diagnosed by X-ray of the eye.

The main problem with metal on the cornea is rusting, which causes a dark spot on the clear part of the eye and can cause a scar, which affects vision.

Infection is a problem, especially if you use unsterile drops in the eye.

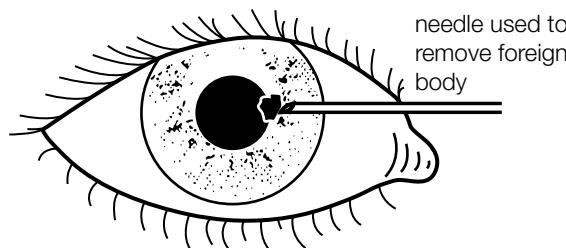
What should you do?

If you get a foreign body in your eye, go to your doctor as soon as possible. It is easier to remove and has less chance of rusting if you attend early.

What is the treatment?

The doctor will usually check your vision and examine your eyes. The foreign body will be located (sometimes it has actually already come out beforehand, but still feels as though it is in the eye). Since the eye is very sensitive to pain, the doctor will usually put some local anaesthetic drops into the eye to make removal comfortable.

The foreign body will be removed either with a cotton bud or, if it is stuck in the cornea, with a needle.



What is the follow-up treatment?

If a metal foreign body has been removed from the cornea, some eye drops will be placed in the eye. The drops should be put in regularly as directed by your doctor.

Then an eye pad or patch will be placed over the eye. It is important to keep this pad on, because it allows the small defect in the cornea to heal. Once the local anaesthetic wears off (about 5 minutes), you will have some discomfort in the eye. This can be relieved by taking aspirin or paracetamol. You should not drive with an eye patch on.

You should come back for review as specified by your doctor.

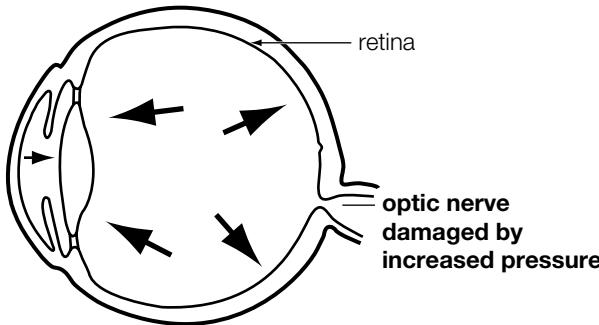
The eye will not heal in less than 48 hours after removal of the foreign body.

How can foreign bodies be prevented from entering the eye?

Wear good eye protection, preferably close-fitting plastic eye glasses with protective sides. Do not walk or stand close to someone who is grinding or drilling. Use eye protection in dusty or windy areas.

What is glaucoma?

Glaucoma is a common but serious eye disorder caused by increased fluid pressure within the eyeball. This high pressure can damage the delicate blood vessels and nerve fibres in the eye. The pressure in this watery fluid builds up because the drainage system gets blocked. Glaucoma, which runs in families, is the second most common cause of blindness in Australia.



Increased fluid pressure in the eye

What are the two main types of glaucoma?

1. Acute glaucoma: This develops suddenly and painfully.
2. Chronic glaucoma: This is the common type, which develops slowly and may not be noticed by the patient.

What are the symptoms?

Acute glaucoma

Symptoms include blurred or foggy vision, rainbow halos around lights, pain (may be severe) in the eye, nausea and vomiting, a red eye.

Chronic glaucoma

At first there are usually no symptoms. The first change is loss of small areas on the outer (side) field of vision in each eye. You may become aware that your field of vision is not so wide. If untreated, the loss of vision creeps in from the outer fields so that the eye becomes partially or totally blind.

How common is it and who gets it?

Anyone at any age can get glaucoma, but the older you are the more likely you are to get it. Most people are over

40 years when it comes on. Those over 65 are at greater risk, with 1 person in 20 being affected and 1 in 10 at 75 years.

Risk factors include a family history, increasing age, short-sightedness and diabetes.

What are the risks?

Blindness is the end result without treatment. If detected early, it can be treated successfully.

How is it diagnosed?

It is detected by routine examination of the eye and by a special instrument being placed on the surface of the eye to measure the pressure of the fluid in the eyeball. It is a simple and painless test that is usually done as a routine screening test by doctors, especially eye specialists.

How can it be picked up early?

Visit your doctor when you suspect eye trouble such as:

- frequent changes of glasses that are unhelpful
- blurred or fogged vision
- loss of side vision
- recurrent pain
- inability to adjust eyes to a darkened room
- coloured halos around lights.

Have regular eye examinations (e.g. everyone over 35 should have routine tests and in particular those over 60 should have glaucoma tests every 2 to 3 years). If you have a close relative with glaucoma, you should have yearly inspections.

What is the treatment for chronic glaucoma?

Glaucoma can be controlled but not cured. Special eye drops to lower the pressure in the eyeball are usually used to treat glaucoma. Oral medications, laser treatments and sometimes surgery are used also. The eye drops are instilled 2 to 4 times a day and will have to be taken for life. Some drops are unsuitable if you have asthma.

Remember

- Glaucoma is common—1 in 80 people over 40 years of age have it.
- It causes vision loss or blindness.
- It can be treated successfully, especially if detected early.
- It may be symptomless at first.
- Always have unusual eye problems checked.

Macular degeneration

What is the macule of the eye?

The macule is the vital small central area of the retina at the back of the eye near the optic nerve. It is tightly packed with millions of nerve cells that are sensitive to light. This area receives the light that is focused by the lens onto it and converts the light into nerve signals that are passed along the optic nerve back to the brain. The brain then converts these signals into detailed colour images.

What is macular degeneration?

Macular degeneration (MD) is a feature of older people and occurs when the macule becomes damaged by a faulty blood supply. The small blood vessels just beneath the retina constrict and cause degeneration of the retina with blurring of vision in the centre of the field of vision. When it occurs later in life it is referred to as age-related macular degeneration (AMD).

There are two types:

- dry MD (9 out of 10 cases), which develops slowly over years
- wet MD, where new blood vessels leak blood and fluid under the retina. This is more serious because scar tissue develops.

How common is age-related macular degeneration?

It is common and is the leading cause of blindness in Australia. It usually occurs in people who are older than 50 years, especially in those over 65. About 15 in every 100 people older than 50 years have early signs of MD but only 1 or 2 people become severely affected.

What is the cause of AMD?

The precise cause is unknown.

The main known risk factors are:

- increasing age
- poor diet/nutrition
- smoking
- family history.

What are the symptoms and signs?

- Central vision appears blurred or fuzzy (this is the first sign)
- Distortion of vision
- Straight lines appear wavy
- Difficulty recognising faces
- Blind (or blurred) spot in centre of vision

AMD usually develops gradually and is always painless. It usually affects both eyes either at the same time or one after the other. If it continues unchecked the result is severe impairment of vision. When both eyes become affected reading and other activities requiring strong vision are impossible. Eventually central vision disappears altogether

but the outer (peripheral) field of vision always remains in good condition.

How is AMD diagnosed?

The diagnosis is made from:

- the typical history
- examination of the retina by a specialist
- the Amsler grid test: shows distorted lines
- fluorescein angiography (specialised imaging after injection of dye into a vein).

How is AMD treated?

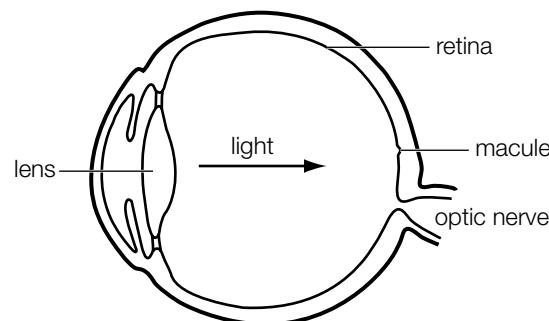
No treatment is available to stop or reverse dry AMD but wet macular degeneration can be treated with a view to halt its progress with laser photocoagulation treatment. Spectacles may give some help to vision.

How can AMD be prevented?

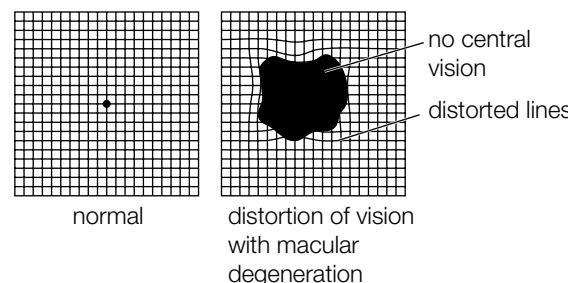
The following measures may help.

- Eat a healthy, well-balanced diet rich in antioxidants.
- Keep a healthy lifestyle.
- Don't smoke.
- Provide adequate eye protection from sunlight, especially when young: wear good-quality sunglasses.

Note: If you are diagnosed with AMD it is beneficial to seek out an AMD patient support group.



Cross-section of the eye



The Amsler grid test

What is a stye?

A stye is an infection of the root of an eyelash that results in a small tender red lump at the edge of the eyelid.

What are the symptoms?

The symptoms usually develop over a couple of days and progress as follows:

- A tender swollen lump on the edge of the eyelid.
- The lump gets more painful and red.
- A small collection of yellow pus appears at the point where the affected eyelash comes out of the eyelid. This is referred to as pointing of the pustule.
- A sensation of something in the eye with irritation and watering of the eye.

What causes styes?

A stye can just appear for no apparent reason. A bacterium (germ) gets into the hair follicle at the root of the eyelash and multiplies to form a tiny abscess called a pustule. The usual germ is *Staphylococcus aureus*, which is often found on normal healthy skin.

The germ usually does no harm but sometimes can cause an infection if the skin is broken. Hair follicles are prone to getting infected. A possible way in which the infection occurs is by picking the nose and then rubbing the eye with that hand.

What is the outcome?

The skin over the stye may give way and pus is released so that the swelling goes away quickly and the eye feels quite comfortable. Sometimes the body's immune system fights the infection and the stye can settle by itself without bursting. On the other hand the infection may spread along the eyelid, causing the lid to look swollen, red and inflamed.

The infection may also spread to cause more styes.

However, styes do not usually cause any damage to the eyes or eyelids and may be just a 'one-off' infection. Most styes are one-off episodes.

What is the treatment?

The various treatment options include:

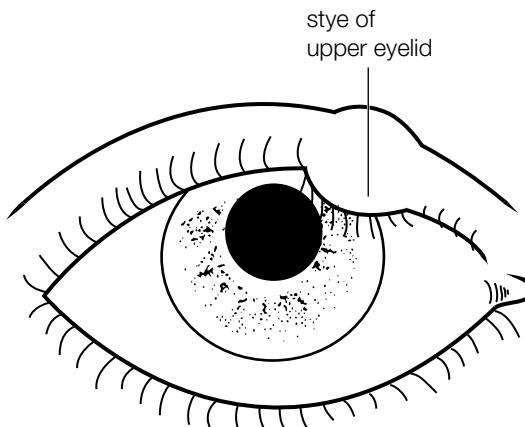
- No treatment. Styes can be left alone as they tend to burst, release pus and then heal, leaving a normal eyelid. A stye does require careful watching in case it gets worse and antibiotic ointment is required.
- Hot compresses. Hot, moist compresses can relieve discomfort and help draw out the infection. A clean face washer or piece of cloth that has been placed in hot water (but not so hot that it causes discomfort or a burn) is ideal. It is then gently but firmly held against the closed eye for about 10 minutes until it cools. This is then replaced with another compress. Do this at least 4 times a day. This treatment is best done by the person with the stye.

- Antibiotics. If the stye does not clear up or is spreading, an antibiotic ointment or perhaps medication taken by mouth may be prescribed.
- Painkillers. Paracetamol or other painkillers should be taken to relieve any pain.
- Releasing the pus. The pus can be released by inserting a sterile needle into the 'head' or pointing end; leave it to your doctor to do this.
- Removing the eyelash. If the stye is large and 'ripe', pus can be released by removing the responsible eye lash.

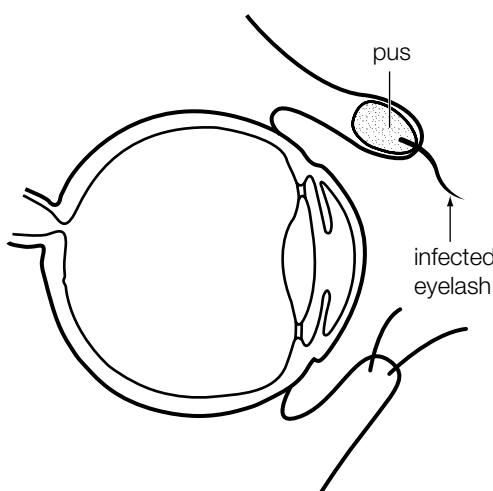
Important: Do not squeeze a stye.

How can spread of infection be prevented?

- Don't share face washers or towels with anyone else.
- Don't squeeze, touch, pick or rub the stye.
- Throw any used compresses into a rubbish bin after wrapping in paper.
- Always wash your hands after touching the affected eyelid.



Front view



Cross-section view

Watering eyes

What are tears?

Tears are a mix of water, salt, protein and mucus. They are produced 'around the clock' by the lacrimal glands in order to keep the eyes moist, healthy and clean by washing away specks of dirt and other material. The tears flow into the eyes through tiny tubes from the lacrimal glands. They then drain away through two tiny openings called puncta into the main collecting duct called the nasolacrimal duct. This drains into the inside of the nose, so tears eventually enter the back of the throat and are swallowed.

Who gets watering eyes (epiphora)?

Some people, especially older people, are bothered by too many tears and constantly have watery eyes. It can occur at any age but is most common in babies and in people over the age of 60. It can affect one or both eyes. Watering eyes may be acute (sudden and temporary) when it is usually caused by emotion or by an irritation such as grit, an insect, sawdust or an allergy. Chronic or persistent epiphora is more complex and may require surgery.

What are the symptoms?

These include:

- tears on the cheeks and eyelids
- blurred vision from excess tears
- red, irritated eyes
- mucus or pus-like discharge from the puncta
- tender infected lump on the inner corner of eyelid.

Some of these symptoms are caused by infection in a stagnant drainage system.

What are the causes?

The two main causes are faulty drainage of the tears due to a blockage somewhere in the lacrimal drainage system and an overproduction of tears. Sometimes the cause is unknown.

Drainage (plumbing) faults

Important causes of blockage of the draining channels include:

- immature drains, especially the nasolacrimal duct, which is common in babies where the ducts are narrow and tight: this condition usually settles by the age of 6 to 12 months as the ducts expand with development

- gradual narrowing with age from mild infections, sinusitis, shrinkage of ducts, scars from injury or a combination of these factors
- blockage of the puncta due to the same reasons
- deformities of the eyelids such as ectropion (lower eyelid turns outwards).

Making too many tears

Causes of overproduction of tears include:

- physical irritants (e.g. scratches, pollen, dirt or grit)
- dry-eye syndrome, which provokes excess poor-quality tears
- chemical irritants (e.g. fumes, smoke, smog, onions)
- infection of the conjunctiva—*infective conjunctivitis*
- entropion, which is irritation from ingrowing eyelashes
- cold air from wind or air-conditioning on the face (beware in cars)
- allergy causing inflammation—*allergic conjunctivitis*
- lack of sleep
- inflammation of the eyelids (e.g. blepharitis)
- eyestrain from constant close work (e.g. reading, sewing).

What is the treatment?

Drainage problems

Doctors can perform minor operations to correct these.

- Nasolacrimal duct blockage in infants is helped by finger massage, but if self-correction fails the ducts can be probed, stretched and then irrigated through a syringe.
- Ectropion can be treated by a minor operation.
- In adults, blocked or narrow ducts can be dilated with a solid probe or treated surgically by refashioning the ducts or creating a new drain.

Irritation problems

The idea of treatment is to treat the cause. For example, your doctor may:

- remove any irritating ingrowing eyelashes
- treat infection with antibiotics (usually drops)
- treat allergies with antihistamine tablets or drops
- remove pieces of grit or other foreign bodies in the eye
- recommend artificial tears (lubricant eye drops) for dry eyes.

Backache

What causes backache?

Backache is usually caused by minor strains in the muscles or ligaments, but more serious lower back pain usually is the result of an injury to one of the many joints in the base of your spine. The joints include the facet joints and discs, which when disturbed can push against painful tissue or nerve roots just behind them. The injury usually happens while bending your spine forwards (flexing it), especially while lifting something heavy.

Never bend forward with your legs straight to perform any task. Once you have experienced back trouble, it has a tendency to recur, and so be careful to protect your back.

How can you care for it?

Adjust your activity to your back discomfort. Take care with posture, making beds and so on. Avoid fatigue. Ideally you should perform a set of exercises to strengthen the muscles of your spine and abdomen.

Sport and exercise

Be careful of sudden twisting movements and sudden overloading of muscles, as in cricket, golf, squash, sailing, weightlifting and horse riding. Walking, jogging (avoid hard surfaces) and swimming are good activities if you can manage them.

Sitting

Avoid sitting for long periods, especially in the car. Your knees should be higher than your hips and your back straight. Maintain the hollow in your back.

Bed rest and sleep

Use a low pillow and lie on your side. Do not lie face-up or face-down. Use a mattress that suits you—try a firm one first.

Lifting

Avoid lifting anything heavier than 10 kg. Squat close to the load and keep your back straight. Do not stoop over the load to get a grip and pick it up. Lift using your knees and legs (not your back) as leverage. Keep your back straight, not bent forwards or backwards.

Your weight

Being overweight adds an extra burden to your back, so it is important to keep as close to your ideal weight as possible. Exercise helps to avoid this problem.

Acute episodes of pain

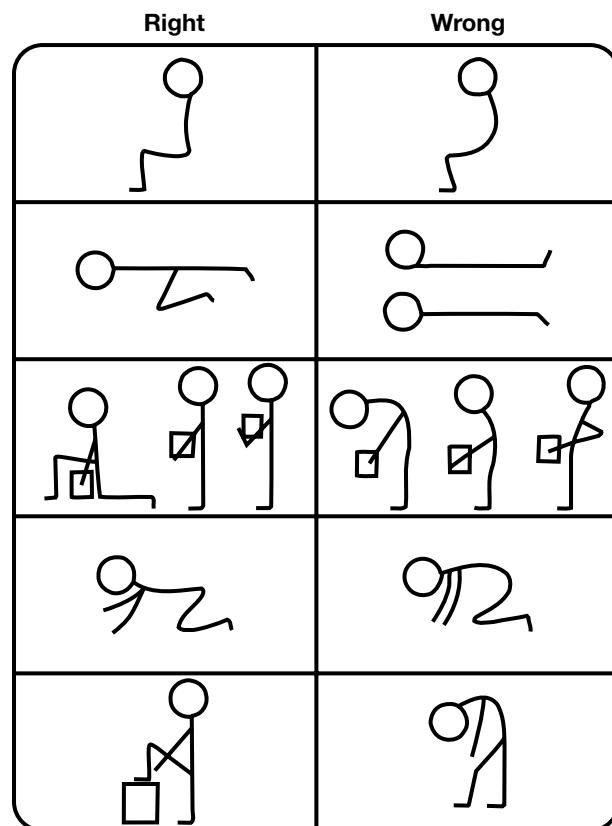
It is best to keep active and keep up your normal mobility (if possible) when your back hurts. If the spasms are severe, you will need to lie down on a firm surface.

Scrubbing floors and gardening

Your hands should be as far forward of you as necessary to keep your back straight. Do not flex your back by having your hands working too close to your knees.

Bending

Take care when bending, for example tying shoelaces or putting on stockings. Put your foot on a stool, chair or box that is near enough to your body and high enough so that you do not have to bend down to your foot.



Rules of care for sitting, lying, lifting and bending

Pain relief

The recommended analgesic is paracetamol or a drug you can buy across the counter. It is best to avoid strong narcotic drugs. Ask your doctor.

Baker's cyst

What is a Baker's cyst?

A Baker's cyst, which is also known as a popliteal cyst, is a pronounced swelling located in the popliteal space at the back of the knee joint. The term 'cyst' is something of a misnomer since it is not a true cyst but is a fluid-filled bursa that communicates with the knee joint through a channel of fluid. The bursa, which is a sac of fluid lying between the two heads of the gastrocnemius (calf) muscle, serves as a type of cushion and helps to reduce friction between the tissues that surround the joint. The cyst is named after the British surgeon, William Baker, who described it.

What is the cause of a Baker's cyst?

The cyst is filled with an oily fluid called synovial fluid which is made within the knee joint. Any inflammatory problem in the knee, especially arthritis or injury to the joint, has the potential to generate more synovial fluid, which in turn overflows into the bursa.

The common causes are:

- osteoarthritis
- rheumatoid arthritis
- trauma or injury (e.g. torn cartilage)
- infection in and around the joint
- juvenile arthritis
- systemic lupus erythematosus.

Sometimes a Baker's cyst develops for no obvious reason, particularly in children.

Who gets Baker's cysts?

It can occur in people of any age or sex. It has two age-incidence peaks at 4 to 7 years and 35 to 70 years, with the most common age of presentation being 55 to 65 years, when it is related to arthritis of the knee.

What are the symptoms?

There may be no symptoms and the person may be unaware that they have a cyst. However, it usually presents as a soft lump or swelling at the back of the knee.

Symptoms when present include:

- unsightly lump most obvious when standing
- persistent pain or aching
- sensation of pressure in the back of the knee
- feeling of fullness and tightness when the leg is straightened
- clicking of the knee
- movable (shape-changing) lump
- restricted mobility.

How is a Baker's cyst diagnosed?

It is usually diagnosed by the doctor's medical examination including the transillumination test with a torch light shining through the fluid-filled mass. The cyst can be confirmed by ultrasound imaging (preferably) or by MRI or CT scans.

What are the possible complications?

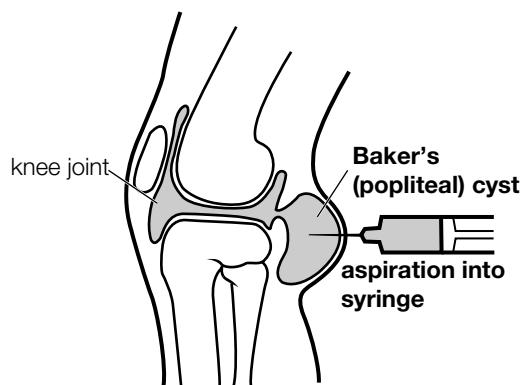
It is a fact that the cysts do not usually disappear spontaneously and if they are left untreated can develop complications which include:

- rupture resulting in pain and swelling in the calf and bruising down to the ankle
- haemorrhage into the cyst
- enlargement extending down to the calf muscles
- infection.

All of these complications result in increasing pain at the back of the knee.

What is the treatment?

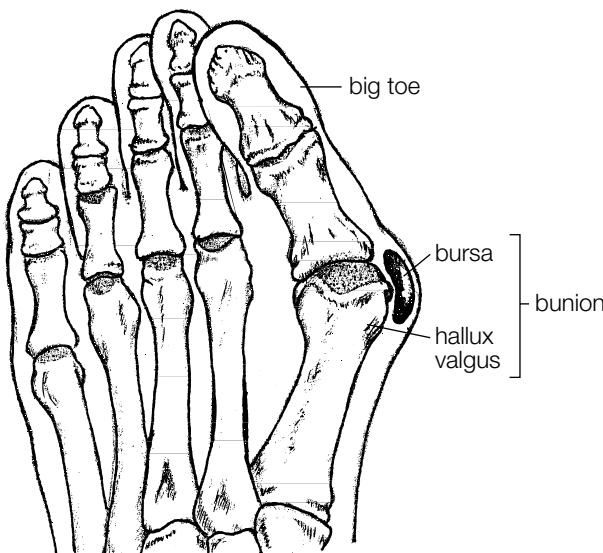
If the cyst is causing no symptoms and is relatively small, no treatment is necessary and a wait-and-see approach is reasonable. This is particularly the case for children, in whom the cyst can disappear with time. Otherwise your doctor will treat the underlying knee condition such as inflammation (e.g. anti-inflammatory medication for arthritis or surgery for a torn knee cartilage). Rest, ice treatment, soft-tissue therapy and physiotherapy can be helpful. Cortisone injections into the knee joint are an option. Aspiration is a good procedure, whereby a sterile needle is inserted into the cyst to drain off fluid. For more severe cases surgery either through the arthroscope or by open surgery can cure the problem. Your doctor will discuss treatment options with you.



Aspiration treatment of a Baker's cyst

What is a bunion?

A bunion is an inflamed bursa (small bag of fluid) overlying a V-shaped bony prominence on the outside edge of the joint at the base of the big (first) toe.



What is the cause?

The cause is a common and relatively minor foot disorder of the big toe called hallux valgus. 'Hallux' is the medical term for the big toe and 'valgus' means bent or twisted outward. If your big toe has grown or been forced into a position where it overlaps with the second toe, you have hallux valgus. It is angled more than 10 degrees outwards.

Hallux valgus can develop because of one or more of the following:

- a family history of foot abnormalities—an inherited weakness in the toe joints
- arthritis of the big toe joint
- badly fitting footwear—usually narrow, pointed-toed, high-heeled shoes that compress the toes together.

What happens to the big toe?

The bony protrusion of the bent big toe is pushed out beyond the normal straight line of the foot and forms the lump that we call a bunion. The outward-angled toe can cross over the second and possibly the third toes, causing pressure problems for those toes, which may result in a 'hammer' toe of the second toe.

The bunion rubs on the inside of your footwear, causing the overlying skin to become rough and thickened into a callus.

What are the complications?

The persistent pressure, especially from a tight shoe on the callus, can cause fluid to develop into a small sac, which is

called a bursa. If it becomes red and inflamed it is termed bursitis. The bursa may become infected, especially in people with diabetes, and this is a serious problem. The overlying skin can also break down to form an ulcer.

The affected joint is also more likely to develop osteoarthritis (wear and tear arthritis) sooner than usual. Hallux valgus can cause foot pain and stiffness due to the altered mechanics of the foot.

Corns and calluses are prone to develop at various points of the foot apart from the bunion.

How common is the problem?

Bunions are a very common condition but most people are not troubled by them. They are 3 times more common in women, which possibly reflects the footwear problem. They tend to run in families.

Can bunions occur elsewhere?

Yes, a bunion can develop over a similar prominence on the opposite side of the foot—over the little toe. It is rather quaintly called a bunionette and is also known as Tailor's bunion. A troublesome callus or corn can develop over it.

What is the treatment?

The best treatment is prevention and careful attention to footwear. Hygiene of the foot is important for those with a tendency to hallux valgus.

Self-help

- Ensure that your shoes fit very comfortably with ample room for your toes.
- Wear a thick, ring-shaped adhesive pad around and over the bunion.
- At bedtime separate the first toe from the others with a foam rubber pad.
- Arch supports will relieve aching in the forefoot.
- For bursitis, promote healing by cutting a hole in the top of an old shoe and wearing it constantly until the foot heals.
- Daubing affected skin with an antiseptic drying agent such as methylated spirits may be helpful.

Professional help

- A podiatrist will be able to provide expert help including the treatment of associated skin problems.
- Medication is usually unnecessary unless the bursa becomes infected.
- Surgery is reserved for severe cases not responding to careful foot care and the results are excellent. However, it is preferable to treat bunions conservatively and sensibly in order to avoid surgery.

Bursitis and tendonitis of the outer hip

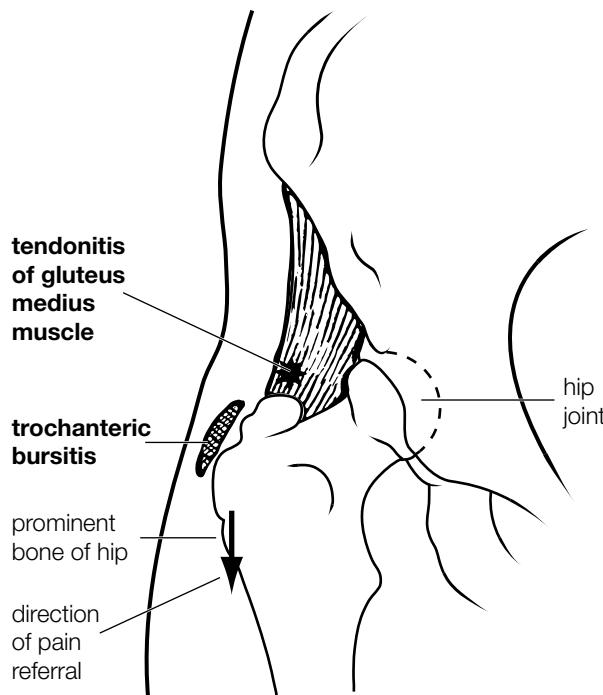
Painful inflammation of the outer hip area at the top of the thigh is a very common cause of disability in middle-aged people. The problem occurs at the trochanteric area of the hip—the greater trochanter is the outer bony prominence of the upper thigh. The condition is also (and more correctly) termed greater trochanteric pain syndrome or trochanteric bursalgia. The muscles of the buttock attach to this bone by tendons and there is a protective shock absorber over the bone, called a bursa. These areas are prone to inflammation, similar to tendonitis and bursitis around the shoulder joint and elbow.

What are trochanteric bursitis and tendonitis?

These are painful, localised inflammations of the bursa (bursitis) and/or the tendon where it joins the bone (tendonitis). It may be difficult for your doctor to tell the difference and, if necessary, special X-rays may be needed to do this. Both conditions may be present at the same time, and either may be mistaken for osteoarthritis of the hip.

Who gets the problem?

Although it can occur in young adults and the elderly, it is a feature of middle-aged women, especially in those who have taken up extra walking, jogging, gardening or a sporting activity such as tennis.



What are the symptoms?

The main symptom is pain on the outside of the hip, which can be referred down the outside of the leg as far as the foot. The pain can be very persistent and severe and affects one's lifestyle. A feature of bursitis is pain at night and you may find it very painful to lie on the affected side because of the tenderness.

Typical features:

- affects women of about 45 to 50 years and older
- pain on outside of hip referred as far as the foot
- pain on lying on the hip at night
- limp.

What is the cause?

The main cause appears to be a friction effect over the bursa area due to excessive walking or similar activity. People with a tendency to walk with intoeing (pigeon toes) are more likely to get bursitis. A common cause is strain on the gluteal muscles of the back, due to the habit of straightening the back after bending it forwards but with the knees kept straight. Being overweight is also an aggravating factor.

What is the treatment?

The first thing to do is stop or reduce the activity causing it, such as sport, long walks and gardening. When walking, it is helpful to use an out-toeing (Charlie Chaplin) type of gait. You should learn to bend your knees before bending your back. Avoid sleeping on the affected side and sleep on a sheepskin rug with a small pillow under the buttock on that side. An ice pack provides some relief from an acute flare-up of pain. Use analgesics when needed.

The best exercises are knee-chest exercises to stretch the gluteal muscles for up to 10 minutes a day and also stretching the straight leg over the side of a bed (a weight around the ankle helps). For severe, persistent pain, your doctor may advise an injection of a local anaesthetic mixed with a safe cortisone agent into the tender area. Very rarely, surgery may be needed to remove the bursa or repair the tendon.

Massage

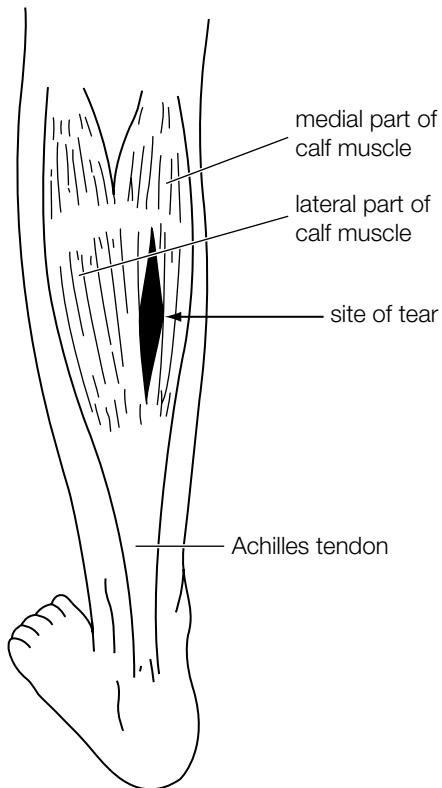
Firmly massage the outer thigh with an analgesic cream such as Tiger Balm or similar, or try using an empty bottle such as a 750 mL soft-drink bottle filled with water as a rolling pin for about 5 to 10 minutes each day.

Calf muscle injury

What is an acute strain or tear of the calf or 'monkey' muscle?

This is a sudden injury to the inside (medial) part of the gastrocnemius (calf) muscle in the lower leg, which is responsible for extending the ankle, such as when pointing the toes. This muscle, which has two main sections, is attached to the heel bone by the Achilles tendon. The muscular strain occurs where the Achilles tendon merges with the muscle belly.

The degree of strain can vary, from slight with only minor symptoms, to moderate where the person can walk only by limping painfully on the toes, to a severe tear where the person is unable to walk.



A calf muscle injury

Who gets a torn calf muscle?

It typically affects the middle-aged, during any activity that overstretches the calf. It can occur as an overuse injury, even in fit athletes, and in the elderly while walking, especially on an uneven surface.

What are the symptoms?

The immediate injury

There is a sudden sharp, stabbing pain or tearing sensation in the lower leg, followed by a burning pain in the affected calf.

The leg may give way, causing the person to fall to the ground.

After the acute phase

- Pain can vary from mild to severe, depending on the severity of the strain
- Inability to put the heel flat on the ground
- Walking on tiptoe to reduce the pain
- Tenderness and hardness in the calf
- Possible bruising over the muscle

Note: Anything that stretches the muscle reproduces the pain.

What is the cause of calf strain?

Calf strain can be caused by any sudden overstretch of the calf muscle, including sudden acceleration from a standing position with the foot bent upwards. This can occur when lunging forward when playing tennis or squash or a similar sporting activity.

What are the risks?

This injury is not serious. If it is not treated and cared for properly it can heal with excessive scar tissue, which makes the muscle weak. This can lead to repeated rupture if the muscle is overexerted.

What is the treatment?

Immediate treatment

- RICE (rest, ice, compression and elevation) for the first 48 hours.
- Ice packs immediately for 20 minutes and then every 2 hours when awake (the pack can be placed over a bandage).
- A firm elastic bandage applied from the toes to below the knee, or an adhesive strapping over the calf.
- For more severe strains use crutches.
- Take painkillers such as paracetamol every 4–6 hours.
- For the first few days avoid activities that increase blood flow, such as hot showers, heat rubs, massage and excessive weight bearing.

Follow-up treatment

- Start activity, such as walking, after 48 hours of rest.
- Use the leg as normally as possible, as pain allows.
- Limit your activity for 3–4 weeks.
- A raised heel on both shoes makes walking more comfortable.

Exercises

- Start gentle stretching exercises as soon as possible to the level of feeling tightness in the calf.

Physiotherapy

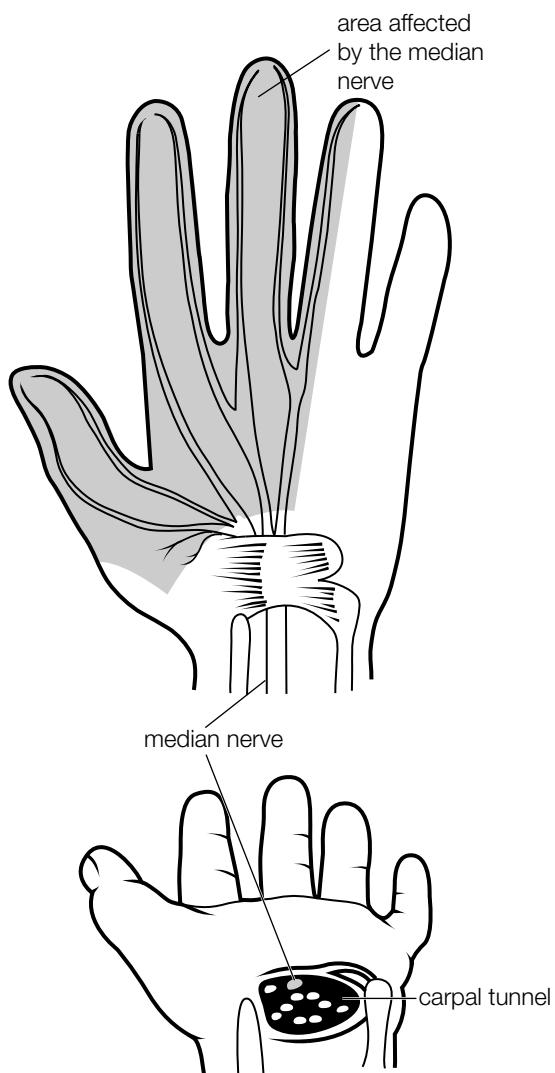
- A physiotherapist can supervise gentle stretching massage and then graduated exercises.

Carpal tunnel syndrome

What is carpal tunnel syndrome?

Carpal tunnel syndrome is a painful disorder of the hand caused by pressure on a very large nerve called the median nerve as it passes through a 'tunnel' at the wrist.

The tunnel is formed by a tough membrane that makes a 'roof' to a natural arch produced by a group of wrist bones (known as the carpal bones). The purpose of this membrane is to keep the many tendons, arteries and nerves that pass under it in place. When it thickens, it causes too much pressure on these structures, especially the sensitive nerve.



Who gets it?

It is quite a common disorder, especially in middle-aged women and in pregnant women. It is thought to be caused by hormone changes causing swelling of the membrane and extra fluid in the tunnel. People doing a lot of hard manual work (such as farmers) seem prone to carpal tunnel syndrome. Sometimes an illness such as rheumatoid arthritis may cause it.

What are the symptoms?

The symptoms are tingling and numbness of most of the hand. The little finger is usually free of symptoms. Pain may shoot up the arm from the wrist. One or both hands may be affected. The pain and tingling is usually worse at night and causes you to wake from a deep sleep. It may be relieved by hanging your hand over the side of the bed and shaking or rubbing it. Warmth seems to aggravate the problem (e.g. under warm bedclothes and washing up in hot water).

What are nerve conduction studies?

Sometimes the diagnosis of median nerve compression is not clear cut, so to confirm the diagnosis scientifically and also test the function of the nerve (especially for damage) a special machine is used to test the nerve.

What are the risks?

It is not a serious problem, but if not treated it can cause permanent weakness and numbness of the thumb and index and middle fingers.

What is the treatment?

Sometimes the problem clears up without treatment, and in some people fluid tablets may help. In pregnant women a splint worn on the wrist at night is helpful, but once the baby is born the problem usually settles of its own accord. A night splint can be effective, especially for older people.

An injection of cortisone into the tunnel can give dramatic relief for quite a long time, especially in people with rheumatoid arthritis.

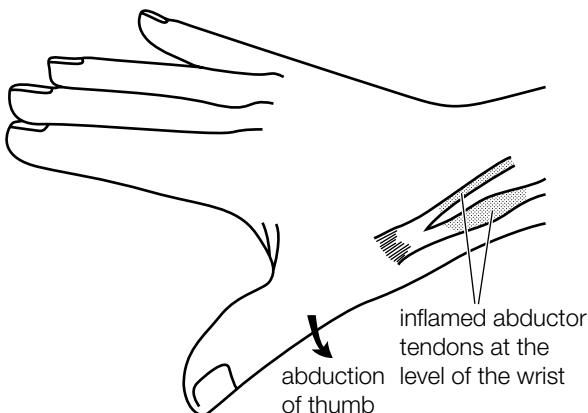
However, most cases require a small operation to relieve the pressure on the nerve. This is done by cutting through the tough membrane so that more space is created for the nerve in the tunnel. It is a most successful operation, leading to immediate relief of the discomfort.

De Quervain tendonitis of the thumb

What is tendonitis of the thumb?

Tendonitis of the thumb is an inflammation of the tendons that are responsible for moving (abducting) the thumb away from the hand, such as the movement involved in picking up a large object by spreading out the hand. It is called de Quervain tendonitis after the Swiss surgeon Fritz de Quervain, who first described it.

The condition is also known as washerwoman's sprain because in the past it was extremely common in women washing and wringing out clothes and migrant woman's thumb because it was a common problem in women (many of them migrants) working in factory assembly lines using staple guns.



The location of tendonitis of the thumb

What is the cause of tendonitis of the thumb?

The cause is excessive friction and irritation of the abductor tendons of the thumb.

The irritation causes the cover around the tendon (which can be compared with a sleeve over an arm) to swell, making it more difficult for the tendon to move in its usual smooth gliding action. This leads to swelling and distortion.

Who gets tendonitis of the thumb?

- Any adult, but it tends to be a feature of middle age—the typical age of onset is 40–50 years
- People performing constant, rapid and repetitious actions

such as staple gun operators on assembly lines, especially if they are unaccustomed to the work

- People undertaking considerable washing duties by hand
- People sustaining a direct heavy blow on the base of the thumb

What are the symptoms?

- Pain gradually developing on the thumb side of the wrist
- Pain on stretching the thumb, especially outwards from the border of the hand
- Pain gets worse with use of the hand and thumb, especially when forcibly grasping objects and turning the wrist
- Pain on movement of the wrist
- Pain during pinch grasping
- Difficulty with writing
- Pain that starts at the wrist and may travel up the forearm
- At times, an awareness of a 'leathery' friction sensation and sound as the thumb is used
- An occasional 'catching' or 'snapping' on movement of the thumb, particularly during abduction
- Difficulty in moving the thumb and wrist (such as when pinching) because of the pain and swelling

How is it diagnosed?

The diagnosis is based on the typical presenting features observed by the doctor. Ultrasound examination may help with diagnosis.

What is the treatment?

- The condition is helped by resting the thumb from the stresses and strains on the tendons produced by provoking activities.
- Your doctor may suggest resting the thumb by wearing a splint. You can be referred for a custom-made splint that involves the thumb and immobilises the wrist.
- Anti-inflammatory medication taken by mouth may relieve the inflammation and therefore the pain.
- A cortisone injection into the space around the tendons can relieve the condition by reducing the inflammation and swelling.
- Sometimes the condition simply gets better by itself, despite carrying on with your normal activities.
- Surgical correction may help when the symptoms are severe and the condition does not improve.

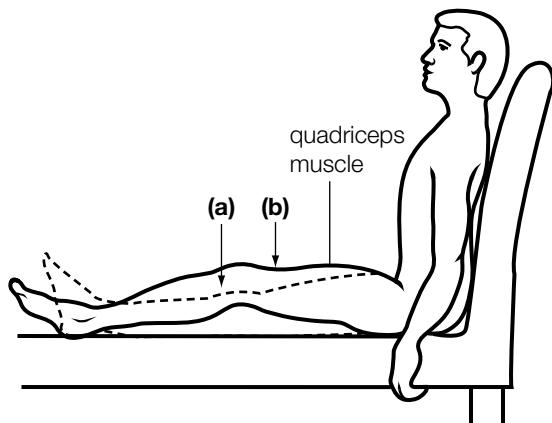
Exercises for your knee

These exercises are designed to help people who have weakness of their quadriceps muscle, which is often caused by any knee disability but especially by problems of the patella (kneecap). Following knee disorders, the knee joint muscles and the powerful quadriceps (used for walking, climbing and running) become weak; the joint can become unstable. If done regularly several times a day, the exercises will help the knee regain its normal strength and stability. Performing Exercise 1 and one of the other three exercises is sufficient.

Exercise 1: Quadriceps tightener

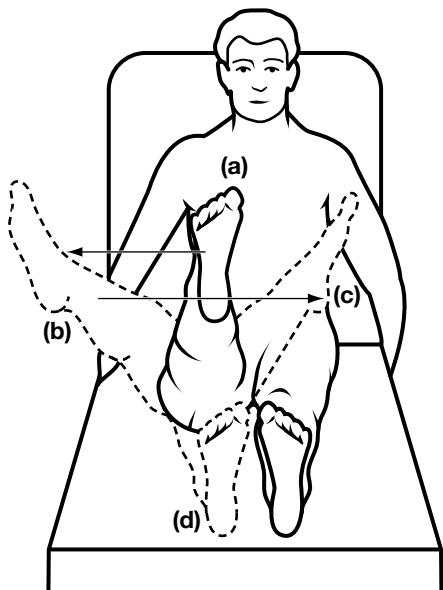
Sit upright on a couch with your legs stretched out straight in front. Slowly and deliberately tighten the thigh muscles by straightening the knee to position (a) from the relaxed position (b); brace the knee back hard. Count 2, and then relax the muscles completely. This should be done several times a day so that it becomes a habit.

Tightening the quadriceps can be done while you are standing or sitting.



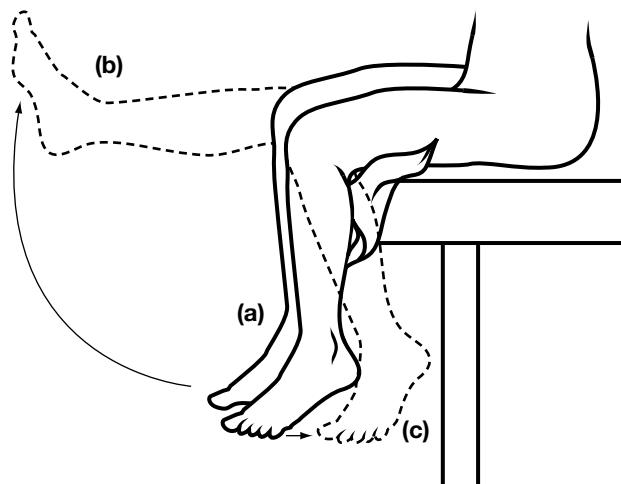
Exercise 2: Leg lifts

Starting from the same position as in Exercise 1, brace the knees straight and then lift the whole leg upward (a), outward (b), across (c) and back to the resting position at (d).



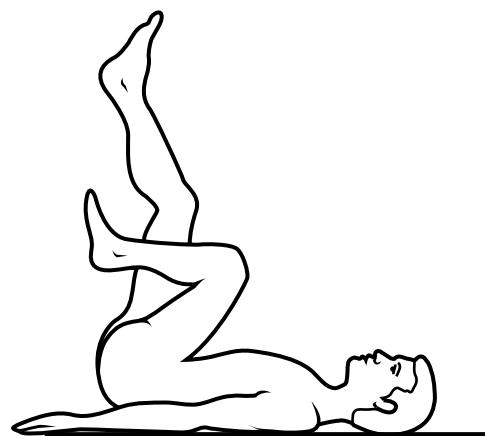
Exercise 3: Alternating leg pushes

Sit on the edge of the couch with a cushion under your knees and your legs hanging down (a). Straighten one knee firmly (b) and at the same time bend the other knee, pushing the calf hard against the couch (c). Slowly and deliberately change position so that the bent knee becomes straight and the other one pushes against the couch.



Exercise 4: Cycling exercise

Lie on your back with your hips and knees bent and make cycling movements with your legs. Elderly patients and anyone with lower back pain should be careful when doing this exercise. This exercise can also be performed on a bicycle, preferably an exercise bicycle.



Exercises for your lower back

The purpose of these exercises is to strengthen the various muscles that support the spine, especially the abdominal muscles and the extensor muscles of the spine.

The muscles of the spine and abdomen support the spine better than any brace or corset. If you have chronic, nagging back pain, it is likely that performing these exercises religiously for 3 months will greatly reduce it.

Guidelines

- Do these exercises on a padded or well-carpeted floor.
- Do them at least twice a day for no less than 5 minutes at a time; once a day is better than not at all.
- Rest between each exercise.
- 2 or 3 of the 6 exercises, including 5b, are sufficient.
- Do not strain.
- The exercise may be uncomfortable at first, and initially each one should be repeated only 2 or 3 times.
- If there is any problematic pain with a particular exercise, stop doing it.

As the muscles stretch and strengthen, the routine will become more natural and enjoyable.

Splinting the lumbar spine

It is a good idea to learn how to keep the lumbar spine in a fixed position by using the abdominal muscles and those around the spine.

- Lie face-up with one hand under your neck and your knees bent.
- Draw in your stomach firmly, and press your lumbar region against the floor by slightly raising your buttocks. Hold—count to 6—relax; repeat 10 times.

Note: Swimming is the ideal exercise for your back.

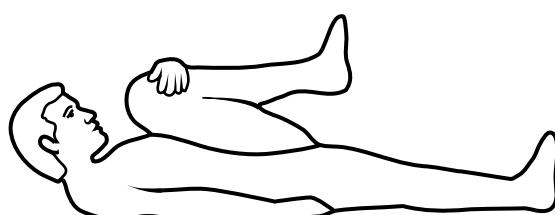
Exercise 1: Back arch

Stand up straight, feet pointing directly forwards and apart as wide as your shoulders, hands placed on the small of your back, fingers pointing backwards. Breathe in and breathe out slowly. As you breathe out, bend backwards as far as you can while supporting your back with your hands and keeping your knees straight. Hold your lower back arched for 5 seconds, then return to the neutral position. Repeat 5 times.



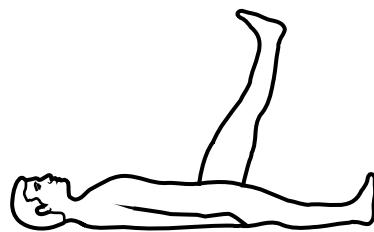
Exercise 2: Knee-to-chest raise

Lie flat on your back, bend one leg up, grasping it with your hand just below the knee, and bend your head forward so that your forehead approaches your knee. Hold for 5 seconds. Repeat on the other side.



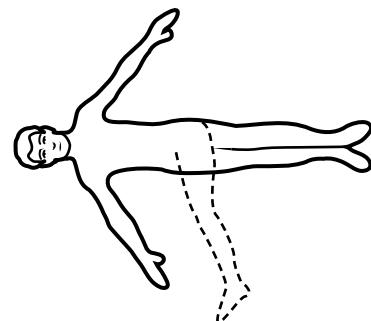
Exercise 3: Straight-leg raise

Lie on your back. With your leg perfectly straight, raise it as high as you can. Repeat with the other leg. Take this to the limit of pain.



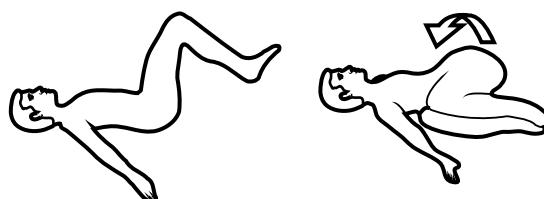
Exercise 4: Straight-leg swing

Lie on your back with your arms spread out on either side. Raise one leg as high as possible, keeping it straight. Swing the leg in an arc from one side to the other. It is important to swing the leg on the side of your back that you feel pain (if you have any). Hold for 5 seconds. Repeat 5 times.



Exercise 5: Pelvic roll and one-sided stretch

- (a) You can get better results if someone pins your shoulders to the floor while you do this exercise. Lie on your back. Lift your legs together in the air and roll them from side to side. Hold for 5 seconds on each side. Repeat 5 times.



- (b) A better variation is to bend up the leg on your painful side and stretch it across your body while you turn your head to the opposite side. Use your hand to reinforce the stretch on your bent leg.



Exercises for your neck

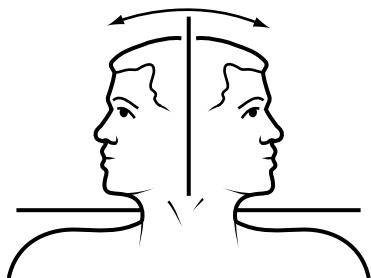
If you have neck pain and stiffness, a course of exercises is important because it loosens the stiff joints (all 35 of them) and strengthens the muscles that control the movements of the neck.

If there is any problematic pain with a particular exercise, you should stop doing it. It is best to keep your head in a neutral position with your chin tucked in before you start.

Do the exercises 2 or 3 times a day. Exercises 1 and 2 can also be done while sitting up, so that all the exercises (except 4) can be done anywhere (such as at the office or in the car when stopped in traffic).

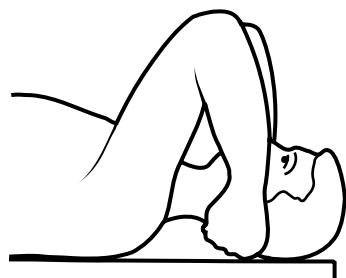
Exercise 1: Neck rotation

Lie on your back on a firm surface such as a floor or bed. Turn your head firmly (but not quickly) to the side by turning your chin towards your shoulders as far as you can. Hold for 3 seconds and then turn to the opposite side. Repeat 5 times.



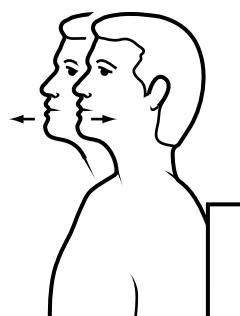
Exercise 2: Hand press

While lying on your back, lock your fingers behind your head and press your forearms against the sides of your head. Press your head down into the locked fingers. Relax. Repeat 5 times. This can be done while sitting upright.



Exercise 3: Bird exercise

Sit upright, tuck your chin in and then thrust it forwards and backwards in a bird-like manner. Repeat this 5 times.

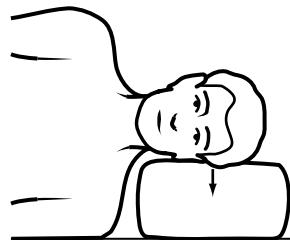


Exercise 4: Resisted side bending

Lie on your side with your head resting on a small, firm pillow. Your head and neck should be in a straight line. Take a deep breath in, hold it and push down hard on the pillow for 7 seconds, then breathe out as you relax. Repeat 3 times. Repeat on the opposite side if this side is tender.

It is important to make sure that you press down on your painful side.

This type of exercise can be used for flexion (lying face downwards), extension (lying on the back) and rotation (lying on the back).



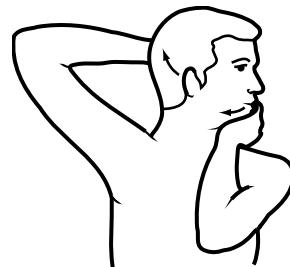
Exercise 5: Resisted side bending

Sit upright in a chair, tuck your chin in and keep your head straight. Place your right hand over the top of your head to grasp the head just above the ear (a left-sided problem is demonstrated) and reach behind your back with the other hand. Pull your head down until it first begins to feel uncomfortable. Take a deep breath in, hold it and press firmly against your hand for 7 seconds (you will be pushing to the left). Breathe out, relax and then pull your head firmly towards the right. Repeat this 3 to 5 times. (Reverse sides for a right-sided problem.)



Exercise 6: Resisted rotation

Sit upright in a chair, tuck your chin in and turn it to the left side to the point of discomfort. Then place your right hand on the back of your head and your left on the chin as shown (a left-sided problem is demonstrated). Take a deep breath in—now try to turn your head to the right but hold it in place by resistance from your hands. As you relax and breathe out, rotate your head firmly but gently towards the left. Repeat 3 to 5 times. (Reverse sides for a right-sided problem.)

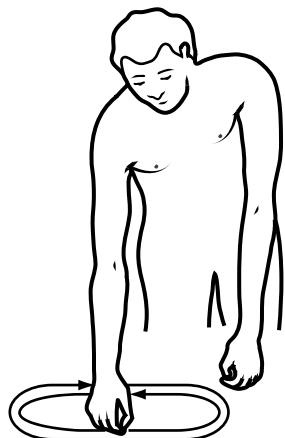


Exercises for your shoulder

A tender, restricted shoulder is caused by inflammation of the tendons and muscles controlling the shoulder or of the main joint. It recovers spontaneously but slowly. The pain subsides, leaving the joint stiff, but it will resolve gradually with use of the limb. These exercises are designed to help recovery.

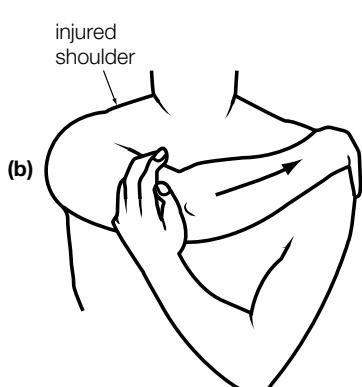
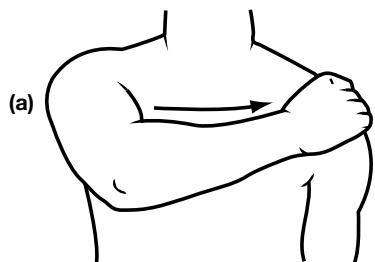
Exercise 1: Straight-arm rotation

Bend forwards and sideways. Let your arms hang down from your shoulders. Make circular movements clockwise and anticlockwise.



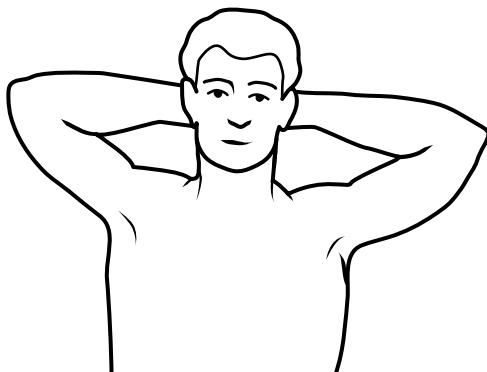
Exercise 2: Shoulder stretch

With the tips of your fingers touching your body, bring the hand of the affected arm across your chest until it reaches the opposite shoulder (a). With the other hand, gently press the elbow of the arm towards the shoulder (b).



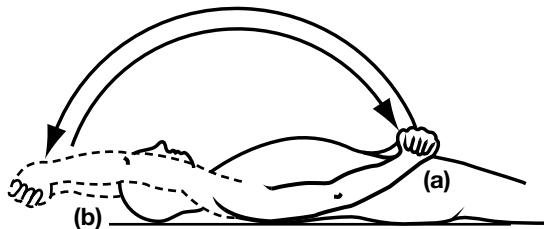
Exercise 3: Shoulder winging

Lock your hands behind your head and brace back the elbows. You can do this while standing or lying on your back.



Exercise 4: Coupled arm swing

Lie on your back and intertwine your fingers across the front of your body (a). Lift the affected arm with the 'good' arm to bring the hands up and over your head (b). Return the arms to the starting position (a), again carrying the weight of the affected arm with the other hand.



Exercise 5: Towel exercise

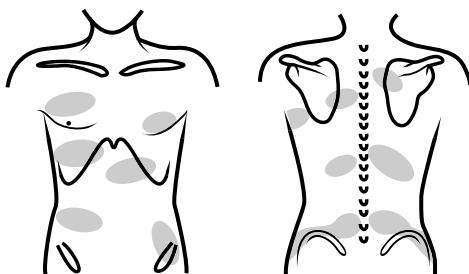
When the shoulder is recovering, the following exercise should be done. Put a towel over the normal shoulder and grasp the front end with the normal hand. Place the affected arm up the small of your back and grasp the other end of the towel with it. Make a seesaw movement as if drying your back.



Exercises for your thoracic spine

Pain in your thoracic spine

Pain in the thoracic (upper) area of the back is common in people who sit bent forwards for long periods, especially students and typists, and those who lift constantly (such as nursing mothers). The symptoms include pain between the shoulder blades (typically) and possibly difficulty in taking a deep breath. Sometimes the pain can be felt in the front of the chest.



Examples of pain distribution in the thoracic area

There appear to be two main causes:

1. chronic strain of the ligaments binding the vertebrae together due to poor posture
2. stiff or 'jammed' joints where the ribs join the spine—usually due to injury, including lifting and falls.

How can it be prevented?

Maintain a good posture by doing the following:

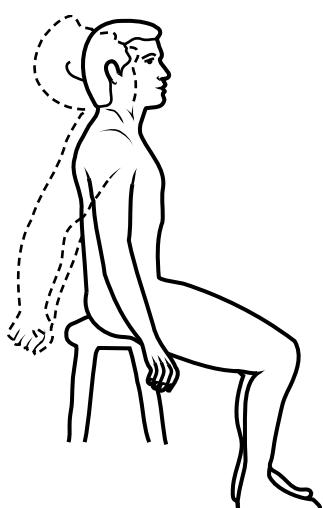
- Keep your head erect.
- Brace your shoulder blades together and then release—practise many times a day.
- Look after your posture at the office; have a good chair with a firm back support.

Exercises

Select at least 2 exercises that suit you and perform them 2 or 3 times a day for about 5 minutes.

Exercise 1: Shoulder brace

Brace the shoulder blades as you sit or stand, by swinging your clasped hands behind your back, extending your head back at the same time.



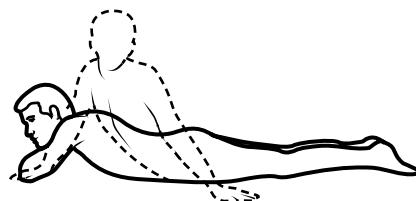
Exercise 2: Back arch

Lie face downwards. Lift your shoulders, hold for 10 seconds, then relax.



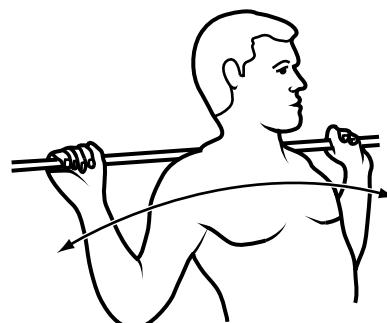
Exercise 3: 'Seal' movement

Lie face downwards. Lift from the waist, and rotate your upper trunk from side to side so that you feel a tight stretch in your back.



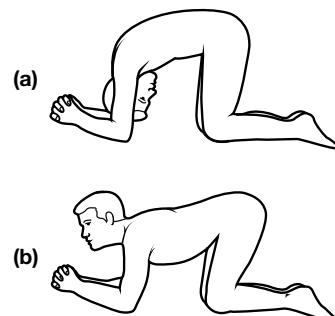
Exercise 4: Broom-handle stretch and swing

Place a long rod, such as a broom handle, behind your neck, grasp it as shown and rotate your body from side to side, reaching maximum stretch. This is the best exercise for your upper back.



Exercise 5: Knees-to-elbows back arch

Position your back like a cat, as illustrated (a). Support yourself on both knees and elbows. If you need to exercise the upper part of the spine, place your elbows forward and lower your chest (b). For the lower part of the back, perform the exercise on your hands and knees. Hunch your back as you breathe in, and then arch it as you fully breathe out.



Fibromyalgia

What is fibromyalgia?

Fibromyalgia is a chronic pain disorder affecting the soft tissues of the body (muscles, muscle coverings and ligaments) over a widespread area from the neck to the knees. In the past it has been called fibrositis and soft-tissue rheumatism. A feature of this rather puzzling condition is that it is chronic, meaning that it lasts for at least 3 months and usually on and off for years.

What is the cause?

The cause of fibromyalgia is unknown. What is known is that certain chemical substances produced in the central nervous system circulate to the soft tissues and make them very sensitive to sensations of pain. There is no hidden serious disease, injury or other damage that causes the problem. There may be a genetic predisposition.

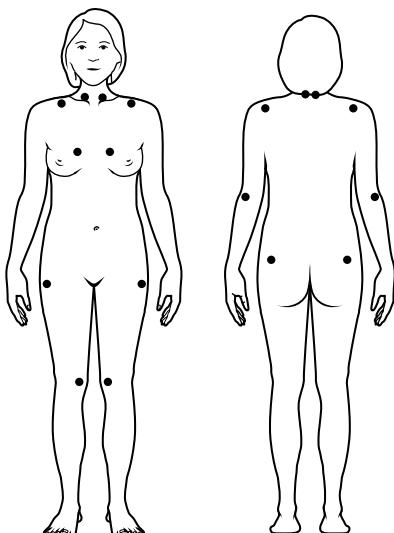
Who gets fibromyalgia?

It occurs in all types of people. It usually appears in adults between the ages of 30 and 60, particularly in people in their 30s and 40s. It is 6 times more common in females than in males.

What are the usual symptoms?

- Aches and pains in the areas shown, especially of the neck, shoulders and back
- Stiffness in these areas
- Tenderness over spots in these areas, called 'trigger points', which are sensitive to touch
- Fatigue
- Sleeping difficulties
- Emotional reactions to the problem

Note: The degree of pain varies from person to person and for an individual can vary from day to day.



Typical tender points of fibromyalgia

What are the aggravating factors?

- Stress
- Fatigue and overwork
- Exposure to dampness and cold
- Excessive activity

What is the outlook?

Despite the severity or length of the discomfort, the problem always has the potential to settle down. Spontaneous recovery occurs in some people. Others tend to have flare-ups with periods of feeling well on and off for a long time, even years. Fibromyalgia, although uncomfortable, is not life-threatening. A good way for a patient to cope with it is to consider it rather like tinnitus (constant ringing in the ears) of the muscles, which is there in the background but not so noticeable when one keeps busily occupied and distracted with interesting things.

What is the treatment?

There are many treatments available, but no special magic one. The goal of treatment is self-management. It is advisable to avoid multiple treatments, especially physical treatments that do not give significant relief.

Self-help

Try to understand what aggravates the problem (such as stress, emotion, heavy activity, tiredness) and avoid these factors. Try other strategies that may suit you. Examples of these include:

- heat such as hot baths and showers, heat packs or compresses
- relaxation techniques
- pleasant distractions
- an exercise program—exercise is very important
- a posture-related program (e.g. yoga, tai chi)
- hydrotherapy.

There is no proven, special diet but avoid substances that interfere with sleep such as caffeine and alcohol.

Support programs

Most people are helped by a relaxation program and also a supervised rehabilitation exercise program, including walking, swimming and cycling. There are experienced therapists who can help. It is very helpful to join a fibromyalgia support group.

Medication

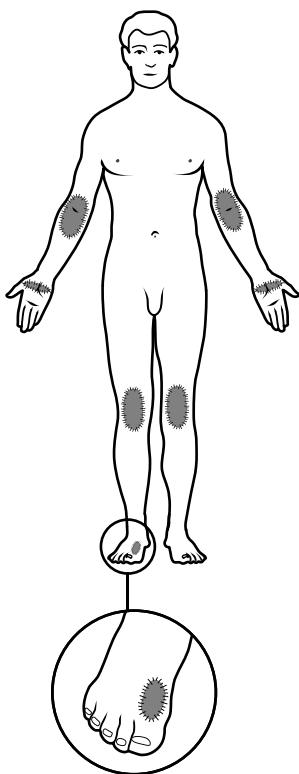
There is no single drug for fibromyalgia but there are a variety of drugs that can help some people on an individual basis. Your doctor may give you a trial on one of these.

Gout

What is gout?

Gout is a type of arthritis that is caused by uric acid crystals getting caught in the spaces between the joints of the feet, the hands and some larger joints. The tissue around the joints becomes inflamed, and this inflammation triggers the sensitive nerve endings at the joint, causing extreme pain.

Uric acid is a waste product from the body, especially from proteins called purines. It is passed out in the urine by the kidneys, which sometimes cannot cope with the load of uric acid, and this causes a build-up in the body.



Typical sites of pain in gout

What are the symptoms?

The main symptom is severe pain, usually in the hands or feet, especially at the base of the big toe. Sometimes gout can strike in other joints, such as the elbow or the knee.

The pain usually comes on without warning, often in the early hours of the morning, and soon the joint becomes so tender that one cannot bear even the weight of the bedsheets. The inflamed skin over the joint is often red, shiny and dry. The first attack usually involves only one joint and may last from a few hours to several days, generally about 2 or 3 days, depending on how soon treatment is commenced. Sometimes there may be only one attack in a person's lifetime.

Who gets gout?

Almost any person can get gout, because all human beings produce about as much uric acid as the kidneys

can handle. However, it does appear to be hereditary and is far more common in men, especially between the ages of 30 and 60.

It is one of the oldest disorders known to humans, and some well-known victims include Alexander the Great, Kublai Khan, Michelangelo, Martin Luther, Isaac Newton, King Henry VIII, John Wesley, Francis Bacon and Benjamin Franklin.

What brings on gout?

Contrary to popular belief, it is not necessarily brought on by high living and gluttony. Overindulgence in rich foods and alcohol can certainly bring on an acute attack in those who are prone to gout. It is associated with obesity and high blood pressure. Some drugs, particularly diuretics (fluid tablets), injury, surgery, dehydration, dieting or starvation can bring on gout, but alcohol is the main factor.

What are the risks?

Gout is a curable disease, but if it is untreated it can cause kidney disease, including kidney stones.

What is the treatment?

The acute attack

The earlier the attack is treated the better. Contact your doctor about the best treatment and the right painkiller. Aspirin is not recommended for the pain of gout.

Bed rest is important. Some relief can be obtained by applying a hot compress or ice to the affected joint. Keep the weight of the bedclothes off the foot by placing a bed cradle or similar object under the bedclothes.

Since gout may strike only once, no further treatment is needed apart from following the 'rules of moderation'. If gout keeps returning, it will be necessary to go onto tablets that may have to be taken for a lifetime in order to prevent more acute attacks.

Rules of moderation

Do:

- restrict intake of food high in purines, especially organ meats (liver, brain, kidneys, sweetbread), shellfish and tinned fish (sardines, anchovies, herrings)
- reduce your intake of alcohol, especially beer and red wine
- reduce or cease intake of sugary, fizzy soft drinks and fruit juices that contain fructose
- eat a normal, well-balanced diet
- drink plenty of water—at least 2 litres a day
- maintain a normal weight, but avoid 'crash' diets
- wear comfortable shoes
- get regular exercise.

Don't:

- take your worries to bed
- exercise too strenuously
- overexpose yourself to cold
- drink excessive amounts of alcohol (keep to a modest level only, e.g. 2 standard drinks a day maximum)
- drink fizzy, sugary soft drinks.

Hamstring muscle injury

What are the hamstrings?

The hamstrings are a group of large powerful muscles at the back of the thigh, which are particularly well developed in athletes. There are three muscles in the group: the semitendinosus, semimembranosus and biceps femoris. To be functional, the muscles have to be attached in such a way that they can straddle joints so that the joints can bend in flexion and extension. In the case of the upper leg, the joints are the hip and the knee.

All three hamstring muscles are attached above to the pelvis on to a prominent bone, the ischial tuberosity, which is the so-called 'bum bone' that you can feel at the lower end of the buttock. The lower attachments are by the tendons of the muscles to the tibia (shin bone) and fibula just below the knee joint. The hamstrings function by pulling the leg backwards and by propelling the body forwards while walking or running. This is done by hip extension. The other main function is knee flexion; that is, bending the knees.

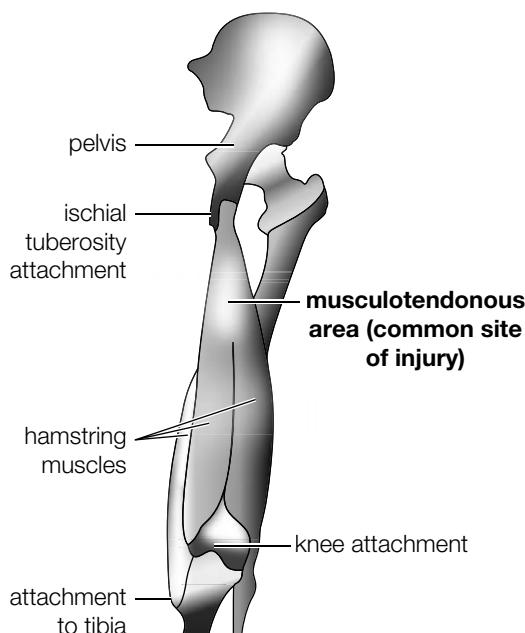
What type of injury usually occurs?

When the muscles are overstretched they can sustain any injury from a mild strain to a complete tear of the muscle. In most cases the injuries occur in the musculotendonous complex where the muscles and tendons join.

The classification of injury is:

- grade 1—a mild strain
- grade 2—a moderate strain with tearing of the musculotendinous complex
- grade 3—a complete tear of the muscle.

In some instances, the muscle and tendon can tear away from the bone, usually at the ischial tuberosity. This avulsion injury may cause a piece of bone to break away.



Back view of leg showing site of a hamstring muscle injury

What activities cause hamstring injuries?

Hamstring injuries are very common in any sport that involves running. A strain occurs when the muscles are overloaded or try to move too fast, as with sprinting, leaning forward when running or during high-velocity movements. A common example is trying to pick up a ball while running.

What are the risk factors?

The predisposing factors for a strained or pulled hamstring include:

- an inadequate warm-up prior to activity
- increasing age
- previous hamstring injury
- poor muscle flexibility
- sciatic nerve pressure (e.g. spinal disc prolapse)
- fatigue from muscle overworking during running

What are the symptoms of a pulled or strained hamstring?

- A sharp sudden twinge or pain (depending on severity of injury) at the back of the thigh during exercise
- Pain on stretching or moving the muscle
- Tenderness of the injured area to touch
- Swelling and bruising
- A limp

The person may or may not be able to continue running or playing sport at the time of injury.

What is the treatment?

Most strains can heal on their own with time, but specialist care with a specially designed rehabilitation program is essential if the injured hamstring is to return to full function faster than usual. A faster and complete recovery is the basic aim of the athlete for this reason.

It is important that treatment commences immediately following injury and especially in the first 48 hours. Analgesics should be taken for pain and crutches used initially for a more serious grade injury.

The basic rules of RICE should be followed:

Rest—Rest the injured muscle at first.

Ice—Apply an ice pack for 20 minutes every 3 hours for the first 2–3 days.

Compression—Apply compression with an elastic bandage around the area to minimise bleeding into the muscle.

Elevation—Elevate the leg.

Early mobilisation of the leg is vital for early recovery and this involves gentle stretching exercises at first, followed by muscle-strengthening exercises under the guidance of a sports physiotherapist or physician.

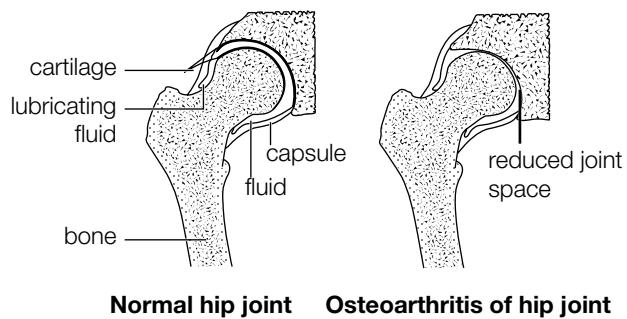
Surgical repair is sometimes used to repair a complete grade 3 tear of a hamstring muscle.

Recurrence of tears is common and hence the importance of specialist rehabilitation. The time to return to sport varies from 1 to 2 weeks for grade 1 tears to 12 or more weeks for grade 3 tears.

Hip: osteoarthritis

What is osteoarthritis?

Osteoarthritis is a form of degenerative joint disease that occurs during the body's ageing process as a result of wear and tear on the joints. The smooth gristle of cartilage that protects the ends of the bones at the joints is gradually worn away. It begins to crack and flake because of overuse, injury or other factors. The joints become rough and stiffness and inflammation can develop. Movement becomes painful and restricted. Osteoarthritis is the most common form of hip disease.



How does it begin in the hip?

The most common reason for loss of cartilage in the hip is wear and tear due to ageing, but many people do not notice it because it may develop slowly. This is called primary osteoarthritis. However, it also commonly develops in people who have a history of hip disorder or injury and this is referred to as secondary osteoarthritis. This includes children who have developed hip problems from birth, such as inadequately treated dysplasia or congenital dislocation of the hip, Perthes' disease or a slipped head of the femur. Previous fractures or dislocations of the hip can predispose a person to early osteoarthritis of the hip.

Who is prone?

The risk increases with age, especially in those who have a history of osteoarthritis in other joints or past hip disorders. It seems to be more common in people who have stressed the hip joint, either by performing heavy manual work or playing sports such as football. Men and women are equally affected. Being obese or overweight is also a risk factor. Symptoms usually appear in middle age.

What are the symptoms?

- At first, the pain is worse with activity and relieved by resting.
- Later, pain can occur at night and after resting.
- Stiffness in the hip, especially after rising in the morning.
- A limp gradually develops, sometimes before the pain is noticeable.
- Pain is usually felt in the groin but may be referred to the knee (in particular), thigh or buttock.

The onset of pain, stiffness or limp may be subtle and not easily noticeable. The problem may occur in both hips, starting in one and then the other. Diagnosis is made on X-ray.

What is the risk?

Osteoarthritis of the hip can affect mobility and make it difficult to cope with stairs and other everyday activities. It can also lead to falls. The main decision is whether major surgery will eventually be required.

What is the treatment?

There is no cure, but there are many ways to maintain mobility and independence.

Diet

Keep weight down and avoid unnecessary wear on the hip joint.

Exercise

Aim for a good balance of adequate rest with mild exercise (such as walking and swimming) but avoid activities that increase the pain. If pain is severe, rest is advisable.

Physiotherapy

This can be helpful in improving muscle tone in the thigh, reducing stiffness and keeping you mobile. Hydrotherapy is useful.

Walking aids

Good footwear and a walking stick or walking frame can help you cope with a painful hip.

Medication

Paracetamol is the recommended painkiller for problematic pain. Your doctor may prescribe anti-arthritis medication called non-steroidal anti-inflammatory drugs (NSAIDs). Inform your doctor if you have a peptic ulcer or get indigestion, because these drugs can aggravate stomach ailments. It is advisable to take only as much of these drugs as is required to relieve symptoms. Some patients are able to use NSAIDs for short courses of about 2–4 weeks, stop for a while and then resume them when the discomfort returns. There are newer drugs, which may be kinder to your stomach.

What about surgery?

Surgery is sometimes feasible for those with severe pain or disability that does not respond to conservative measures. The most common operation is joint replacement, which continues to improve with better materials and surgical experience. Hip joint replacement has proven very successful in about 90% of people who have had the operation. There is no point in putting up with increasing discomfort.

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Knee: anterior knee pain

What is anterior knee pain?

It is a variety of knee pain in which the discomfort is felt in the front of the knee in and around the kneecap (called the patella). The usual cause is a relatively non-serious condition called chondromalacia patella, also known as the patello-femoral syndrome. There are other causes of anterior knee pain but this is by far the most common and needs to be distinguished from arthritis of the knee joint. It is one of the most common problems in sports medicine and is sometimes referred to as 'jogger's knee', 'runner's knee' or 'cyclist's knee'.

How does it happen?

The basic cause is repeated flexion (bending) of the knee in activities such as sport, climbing stairs and bushwalking, especially on uneven ground. Usually there is no history of a preceding injury, but it can follow an accident such as falling directly and heavily onto the kneecap. It is a type of wear and tear on the surface under the patella that results in the smooth surface of cartilage becoming soft and stringy and sometimes inflamed. People who have an abnormal shape or position of the patella are more likely to develop the condition.

Who gets anterior knee pain?

It may affect people at any age but is more common in adolescents or young adults, an age group associated with active participation in sports.

What are the symptoms?

The main symptom is pain or an ache in the front of the knee that sometimes can also be felt deep in the knee. The pain may come on slowly 'out of the blue' and then gradually get worse.

The pain is worse with:

- walking up and down stairs
- running (especially downhill)
- walking on rough ground
- squatting
- prolonged sitting.

A crackling sensation (called crepitus) or clicking or clunking on bending the knee is often heard. Occasionally the knee may give way. Knee swelling is relatively uncommon.

Movie-goer's knee

This condition is sometimes called 'movie-goer's knee' because sufferers prefer to use an aisle seat to stretch the leg out straight into the aisle. A diffuse ache is felt when sitting for long periods with the knee bent.

What is the outlook?

The outlook is very good and a steady recovery can be expected with attention to relatively simple guidelines. Elite athletes require more guidance from therapists if they

wish to remain competitive. Surgery is rarely necessary. X-rays of the knee are usually normal.

What is the management?

The key approach is to rest from aggravating activities such as running, cycling or excessive climbing of stairs and to retrain muscles, especially the quadriceps. Correction of any biomechanical abnormalities of the patella or the feet with the use of taping, orthotics or footwear will be important. Your doctor may refer you to a sports medicine therapist to supervise rehabilitation.

Acute inflammation

This is relieved by rest and ice packs. Sometimes a short course of non-steroidal anti-inflammatory drugs will be necessary; otherwise aspirin or paracetamol will control pain.

Taping

If the patella is 'off-centre', taping of the patella will help relieve acute pain.

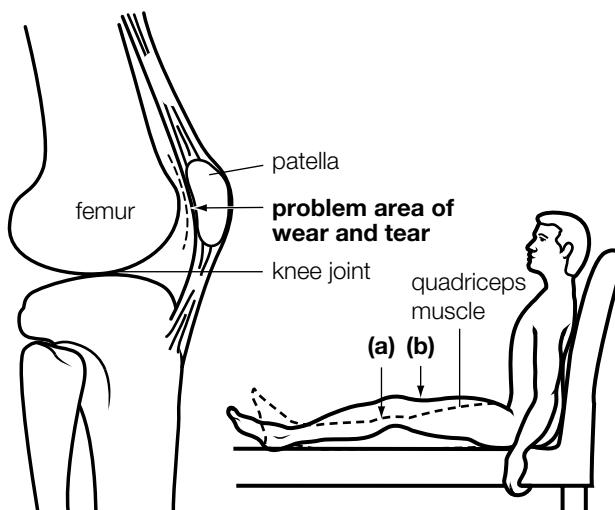
Muscle retraining

Your doctor or therapist will advise on the most appropriate exercises. For straightforward cases of anterior knee pain, simple quadriceps exercises can be very effective.

Quadriceps exercise (see figure)

Tighten the muscles in front of your thighs for about 5 seconds (as though about to lift the leg at the hip and bend the foot back but keeping the knee straight) as in position (a). Hold your hand over the lower quads to ensure that they are felt to tighten. Then relax as in position (b). This tightening and relaxing exercise should be performed at least 6 times every 2 hours or so until it becomes a habit. It can be done sitting, standing or lying.

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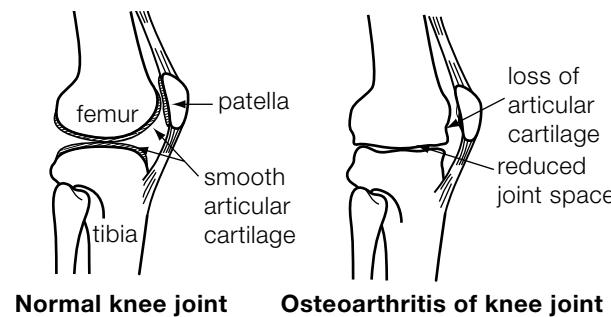


Knee: osteoarthritis

What is osteoarthritis?

Osteoarthritis is a condition that occurs during the body's normal ageing process as a result of wear and tear on the joints. It is also called degenerative joint disorder.

The smooth gristle of cartilage that covers and protects the ends of the bones at the joints (called articular cartilage) is gradually worn away. It begins to crack and flake because of overuse, injury or some other reason. The joints become rough and stiffness and inflammation can develop. Movement becomes painful and restricted, and the muscles that work the joint become wasted.



How does it begin in the knee?

The most common reason for loss of cartilage in the knee is wear and tear due to ageing, but many people do not notice it because it may develop slowly.

However, it also commonly develops in people who injure a knee earlier in life, such as in sporting injuries, especially with a torn cruciate ligament or a meniscus, or in overworked joints such as those resulting from a physical occupation.

Who is prone to the disorder?

Anyone who lives long enough is at risk. Symptoms usually appear in middle life or later. The following are risk factors:

- obesity
- knee deformities (e.g. knock knees, bow legs)
- previous injury
- occupations that strain the joint (e.g. carpet layers).

What are the symptoms?

The main thing you will notice is slowly increasing pain and stiffness in the knee. The stiffness may be more obvious after resting for long periods, especially after sitting in a lounge chair with the knee flexed (bent at right angles).

Other features that may be present are:

- pain aggravated by activities such as prolonged walking, standing, squatting, gardening or housework (e.g. scrubbing floors on knees)
- pain on walking up and down stairs
- a crackly or grating noise (called crepitus) on flexing the knee
- swelling of the knee
- restricted bending
- limping.

What is the risk?

There is usually no serious risk and many people can cope with the discomfort for the rest of their lives. One problem is lack of mobility, and care has to be taken to prevent falls.

What is the treatment?

There is no cure but there are many ways to make life more comfortable and keep you mobile and independent.

Diet

Keep your weight down to avoid unnecessary wear on the knee joint from obesity.

Exercise

Keep a good balance of adequate rest with sensible exercise (such as walking, cycling or swimming) but stop any exercise or activity that increases the pain.

Heat

It is usual to feel more comfortable when the atmosphere is warm. A hot water bottle, warm bath or electric blanket can soothe the pain and stiffness. Avoid getting too cold.

Physiotherapy

This can be helpful in improving muscle tone, reducing stiffness and keeping you mobile. Quadriceps exercise can be beneficial.

Complementary therapies

There is no strong evidence supporting the use of most herbal or other natural remedies, but some people have found acupuncture helpful for pain relief. A natural substance, glucosamine, has proven mild effectiveness for osteoarthritis of the knee. Discuss this with your doctor.

Walking aids

Good footwear and a walking stick or frame can help painful knees.

Medication

If pain is a problem, paracetamol taken when necessary is the recommended painkiller. Your doctor may prescribe anti-arthritis medications called non-steroidal anti-inflammatory drugs (NSAIDs), which should be taken with food. If they help, it is a good idea to take short courses for about 2–4 weeks, have a break from them, and only resume the drugs when the discomfort returns.

Inform your doctor if you have a peptic ulcer or get indigestion. There are newer drugs on the market that may be kinder to your stomach.

Joint injections

Your doctor may inject a cortisone-type fluid into your knee for a very painful episode, but it cannot be done often. Special injections of lubricating fluids are now available and you can discuss this with your doctor.

What about surgery?

Both doctor and patient try to avoid surgery, but it is pointless to suffer unnecessarily. Modern knee replacements give excellent results, and if you have crippling knee pain this operation can give great and lasting relief.

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Neck: painful neck

What causes neck pain?

Pain in the neck is commonly the result of an injury such as a sharp, sudden jerk of the neck, as in a motor vehicle accident. Other causes include blows to the head (such as in boxing and wrestling), striking the head on an overhead object or even simple falls. People often wake up with severe neck pain and blame it on a cold draught, but it is caused by an unusual twist in the neck for a long period during sleep. The pain mainly arises from minor injury to the many small swivel joints in the neck (called facet joints) and less often to injury of one of the discs between the vertebrae. In older people, arthritis can develop in these joints.

What are the symptoms?

The main symptom is pain and stiffness in the neck, but the pain can travel to the head, around the eye and ear or to the shoulder and arm. Problems from the cervical spine (the first seven vertebrae in the spine) can also cause 'pins and needles' in the neck or down the arm.

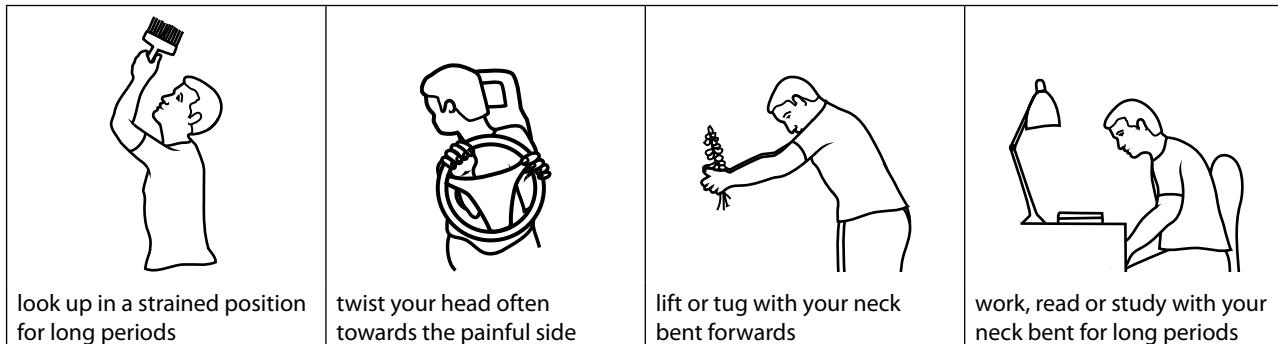
What is the outlook?

Neck pain, which is rarely a severe problem, can clear up very quickly and usually responds very well to physical treatment such as exercises, massage and mobilisation. However, it can be persistent or recurrent, and for that reason regular exercise of your neck is advisable.

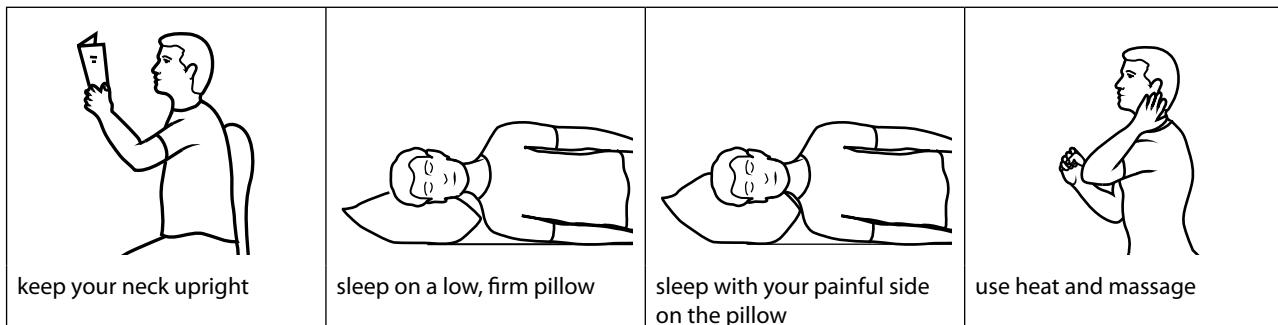
What about cervical collars?

Collars are very helpful for a short period for acutely painful necks, but should not be worn for any longer than 7 to 10 days at a time and not at night. Your neck needs to be mobile and exercised naturally.

Don't



Do



Dos and don'ts

To avoid bouts of further neck pain, the following rules are helpful.

Don't:

- look up in a strained position for long periods of time (e.g. as when painting a ceiling)
- twist your head often towards the painful side (e.g. as when reversing a car)
- lift or tug with your neck bent forwards
- work, read or study with your neck bent for long periods
- become too dependent on 'collars'
- sleep on too many pillows.

Do:

- keep your neck upright in a vertical position for reading, typing and so on
- keep a good posture: remember to keep the chin tucked in
- sleep on a low, firm pillow or a special conforming pillow
- sleep with your painful side on the pillow
- use heat and massage—massage your neck firmly 3 times a day using an analgesic ointment.

Professional help

Your doctor may prescribe mild painkillers such as aspirin or paracetamol or other medicine for a short period, especially if arthritis is developing.

A course of exercises to mobilise stiff joints in the neck and strengthen the supporting muscles is probably the best treatment.

To overcome a painful episode, therapy to the muscles and joints by gentle mobilisation from a trained therapist is highly recommended.

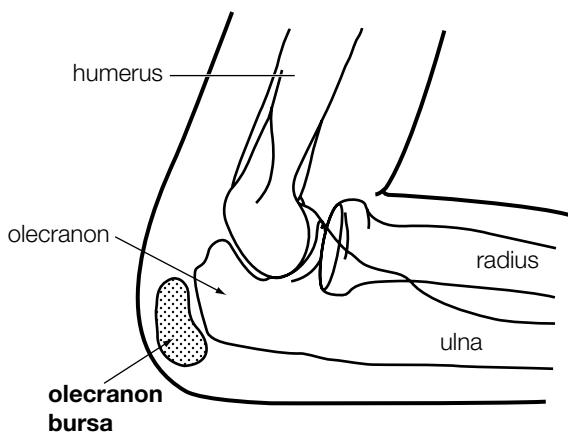
Olecranon bursitis

What is the olecranon bursa?

A bursa is a small bag of fluid that sits over the top of a prominent bone that is prone to get injured because it is close to the surface of the skin. It acts as a protective shock absorber to the bone. An olecranon bursa sits on top of the olecranon, which is the prominent part of the ulna bone that sticks out at the back of the elbow. It is the part of the elbow that you lean on. The bursa makes this bony point smooth but you can scarcely feel it.

What is olecranon bursitis?

Bursitis is inflammation of the bursa, which causes swelling and extra fluid to be made. It usually appears as a soft swollen lump like a small soft woollen 'pompom' about the size of a golf ball.



Elbow joint showing position of bursa over olecranon process of ulna bone

What causes it?

The most common cause is trauma in the form of minor but repeated injury. It often has quaint names such as 'student's elbow', 'miner's elbow', 'plumber's elbow' and 'truck driver's elbow'. Examples include:

- A minor repeated injury due to chronic friction and pressure over the olecranon, such as with students who study with their elbows leaning on the desk and miners, plumbers, carpet layers and other workers whose job involves crawling a lot using their elbows.
- A one-off injury such as a heavy blow to the olecranon

- arthritis, including rheumatoid arthritis, gout and pseudogout, which causes inflammation of soft tissues near joints
- unknown (called idiopathic), where the bursitis appears for no apparent reason, although there may be a forgotten mild injury.

What are the risks?

Bleeding into the bursa may precede the bursitis.

An infection may follow a cut in the skin overlying the bursa. Known as septic bursitis from a bacterial infection, it can be dangerous if not treated promptly.

What are the symptoms?

The usual feature is a swollen soft lump that gradually appears over the back of the elbow. It causes variable discomfort ranging from being painless to quite painful, but does not affect movement of the elbow joint. Small firm lumps may be felt in the soft bursa. If it becomes infected it is usually painful, red and hot, and the person will feel quite sick.

How is it diagnosed?

Your doctor can usually diagnose it by its appearance without any tests. An X-ray may be ordered if a fracture of the olecranon is suspected. Scans and blood tests may be undertaken to investigate infection (usually with an aspirated sample of fluid) or arthritic conditions such as gout and rheumatoid arthritis.

What is the treatment?

The best approach for minor traumatic bursitis is to avoid the friction by avoiding leaning on the elbow or driving with the elbow out the window, for example, and using protective elbow pads if you need to lean on the elbows while working.

No treatment may be needed if the swelling does not interfere with your activity. If the bursa is large, fluid can be drained using a needle and syringe and corticosteroids introduced into the bursa. This treatment can be repeated. If the bursitis persists, it can be removed by a surgical operation. Medical causes such as infection, gout and rheumatoid arthritis have to be treated according to the condition.

If bursitis develops after heavy trauma, it should be managed using the classic RICE method: rest, ice, compression (wear a firm bandage) and elevation of the elbow.

Osteoarthritis

What is meant by arthritis or rheumatism?

Unfortunately, these common terms produce a considerable amount of fear and concern for many people.

Rheumatism is a vague term used to describe aching in joints and muscles, and the word should be avoided.

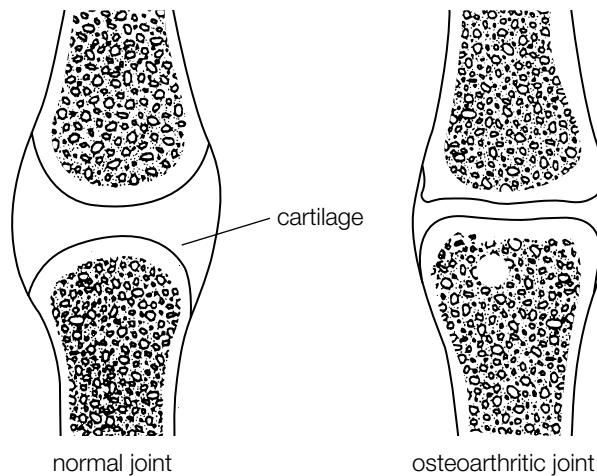
Arthritis means inflammation of the joints, but there are over 100 different types of arthritis. The most serious is rheumatoid arthritis, which is uncommon. The most common is osteoarthritis, which is usually not serious and causes only minor discomfort in some people.

What is osteoarthritis?

This is a condition that occurs during the body's normal ageing process as a result of wear and tear of the joints. It is also called degenerative joint disease.

The smooth gristle or cartilage that covers and protects the ends of the bones at the joints is gradually worn away. The joints become rough, and stiffness and inflammation can develop.

X-rays are taken to confirm the diagnosis of osteoarthritis; all other tests done have normal results. X-rays show some degree of osteoarthritis in 1 or more of the joints of 9 out of 10 people over the age of 40.



Osteoarthritis: the protective cartilage is worn away

How does osteoarthritis begin?

The most common reason for loss of cartilage is wear and tear due to ageing, but many people never notice it.

It commonly develops in joints that were injured earlier in life (such as with sporting injuries) or joints that have been overworked (such as those in the fingers of a knitter or the feet of a ballet dancer).

Osteoarthritis mostly affects the weight-bearing joints such as the spine, knees and hips (especially in overweight people), but the base of the thumb and the ends of the fingers are common sites also.

What are the symptoms?

The severity of symptoms varies, but usually they are pain, swelling and stiffness of the affected joints. Stiffness is usually worse in the morning. Pain is worse after excessive or prolonged activity such as walking for a long time. Movement may be difficult and interfere with normal activities.

How serious is osteoarthritis?

Osteoarthritis seldom becomes a serious problem and does not threaten one's life. It does not cause the crippling deformities of joints seen in the rarer serious forms of arthritis.

What is the treatment?

There is no cure, but there are many ways to make life more comfortable and keep you mobile and independent. Surgery can relieve a joint that is very stiff and painful.

Diet

Keep your weight down to avoid unnecessary wear on the joints. No particular diet has been proved to cause, or improve, osteoarthritis.

Exercise

Keep a good balance of adequate rest with sensible exercise (such as walking, cycling or swimming), but stop any exercise or activity that increases the pain.

Heat

A hot-water bottle, warm bath or electric blanket can soothe the pain and stiffness. Avoid getting too cold.

Walking aids

Shoe inserts, good footwear and a walking stick can help painful knees, hips and feet.

Medication

Aspirin, ibuprofen and paracetamol are effective painkillers for mild osteoarthritis. Your doctor may prescribe anti-arthritis medications, but a few may have to be tried to find the one that works best for you. The tablets should be taken with food. A natural substance, glucosamine, has proven mild effectiveness for osteoarthritis of the knee.

Injections: Lubricants that are injected into the knee are available and suit many people.

Special equipment

It is possible to increase your independence at home. There is a wide range of inexpensive equipment and tools that can help with cooking, cleaning and other household chores. These can be discussed with people at an independent living centre, with physiotherapists and occupational therapists.

The Arthritis Foundation in each capital city is able to provide information about many aspects of arthritis.

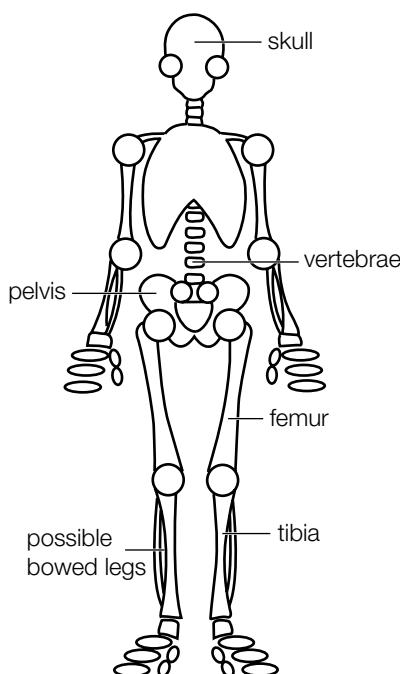
Paget's disease of bone

What is Paget's disease of bone?

Paget's disease is a disorder of bone in which the normal maintenance system that keeps bones healthy breaks down. There is constant turnover of bone cells, but in Paget's disease new bone is produced faster than the old bone is broken down. The new bone tissue is softer and more fragile than usual because it is filled with vascular (bloody) and fibrous tissue. The affected bones become enlarged, misshapen and weaker. The cause is unknown but a viral cause is suspected.

How common is Paget's disease and who gets it?

It is quite common. In Western countries about 2 people in 100 over the age of 40 have it, but this increases to at least 1 in 10 over the age of 80. However, it causes problems in only one-tenth of those affected.



Paget's disease: typical affected bones

Paget's disease can affect both sexes but is twice as common in men than in women. It has a tendency to show up in certain population groups, being more prevalent among Anglo-Saxons, especially those from the north of England.

There is a definite hereditary tendency, as there is an increased risk of getting Paget's disease in those with a family history of it.

Which bones are affected?

Paget's can occur in any bone and may be present in just one or in several bones. The bones most frequently

affected (in approximate order) are the hip bone (pelvis), the thigh bone (femur), the shin bone (tibia), the skull, the spinal bones (vertebrae), the humerus and the collar bone (clavicle).

What are the symptoms?

Paget's disease does not always produce symptoms (only in 1 in 10 to 20 patients). When it does, bone pain (usually in the spine or legs) is the most common and this may be mild but is typically a deep, dull ache, especially at night-time. Other symptoms include joint pain and stiffness (particularly of the hips and knees), difficulty walking, deafness and headache (if the skull is involved).

What are the signs?

The bones may become misshapen, causing problems such as bowed legs or an enlarged skull ('hats don't fit any more'). People may walk with a waddling gait. The skin over the bone may feel warm.

It is easily diagnosed by special blood tests and X-rays.

What are the risks?

The weakened bones are more likely to break and rarely a tumour can develop in the affected bone. Deafness can occur from pressure on a nerve from the enlarged skull. The increased blood flow through the bones can cause heart failure or high blood pressure.

Who should be treated?

Many people, especially the elderly who have no symptoms, need no special treatment. Relatively young patients and those with symptoms, especially in the legs and spine, will require treatment.

What is the treatment?

General measures

- Keep to a healthy diet, especially with ample fruit and vegetables of all types, wholegrain breads and cereals.
- Get adequate rest during a difficult period of pain but generally keep as active as normal.
- Take simple analgesics such as paracetamol for any pain.

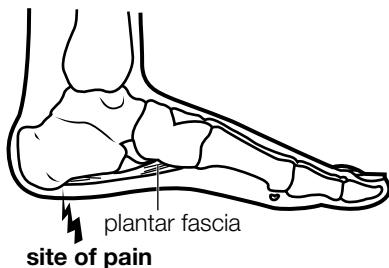
Medication

In the past there was no specific treatment for Paget's disease. There are now at least 3 groups of drugs, but a group called bisphosphonates is currently the preferred one. These have revolutionised the treatment and can be taken by mouth or given by injection. Your doctor will advise about the best drug and any possible side effects. The outlook with these new drugs is very good.

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Plantar fasciitis

Plantar fasciitis is a common condition that causes pain under the heel of the foot. It is known also as 'policeman's heel'. The painful area is usually situated about 5 cm (2 inches) from the back of the heel on the sole of the foot.

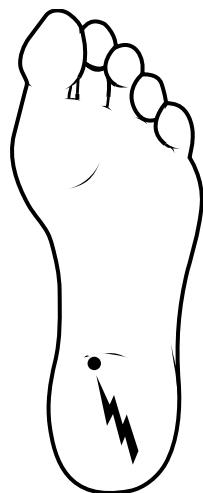


Anatomy of plantar fasciitis

What is the cause?

It is an inflammation of the site where a long ligament called the plantar fascia attaches to the main heel bone (the calcaneus). It is a condition similar to tennis elbow. One known cause is a tear of this tissue, which can happen, for example when a runner takes off quickly. Sometimes a spur of bone develops at this spot, but the spur is not a serious problem.

The problem is not thought to be caused by faulty footwear.



The most common site of plantar fasciitis

Who gets it?

It occurs typically in people over the age of 40, especially if they start a running activity. It occurs in both sexes. It is common in people who have to stand or walk for long periods in their job, such as police officers on a beat.

It is seen sometimes in young sportspeople.

What are the symptoms?

The pain under the heel is worse when the person first steps out of bed or gets up to walk after sitting for a long time. It is relieved after walking about, but then returns towards the end of the day after a lot of walking or standing. Resting will always ease the pain until you get up and walk. Climbing stairs also hurts.

The painful area on the heel is tender to touch, but not unbearably so.

X-rays may show a small spur on the bone, but this spur is not an indication to operate.

What is the outcome?

The pain will usually go away by itself in about 18 months, sometimes as early as 6 months. It is not a serious problem.

What is the treatment?

Rest from long walks and from running is important.

Hot and cold therapy

Alternate placing your foot in very hot and then cold water for 30 seconds each for 15 minutes twice a day. You can also use a commercially available foot hydro-massager.

Heel pads

The standard treatment is to wear a pad at all times inside the shoe or slipper to cushion the heel. The pad is made from sponge or sorbo rubber and should raise the heel about 1 cm. A hole corresponding to the tender area should be cut out of the pad so that this area does not make direct contact with the shoe. The best pad is a special inner sole (called an orthotic aid) that is moulded for your foot to include the arch as well as the heel. A commercially available orthotic is called Viscosport. Special strappings using non-stretch sticking tape can also be used for more severe cases.

Exercises

Perhaps the best therapy is regular stretching exercises (3 times a day) to stretch the fascia and allow it to heal. One exercise is to find a step with a supporting rail or wall nearby to help your balance and stand on it with the balls (front) of your feet, keeping your knees straight. Let your heels gently drop as you count to 20. Then lift your heels and count to 10 and repeat the cycle 3 times.

Injections

If the pain is really bothersome (it is often bad for 2 to 3 months), an injection given by your doctor can give relief for a few weeks. However, it is uncomfortable to have and generally avoided.

Plaster cast instructions

You have had a plaster cast applied to a limb. To allow the plaster to work properly, it is important that you:

- Lie down for the next ____ hours.
- Elevate the limb for the next 48 hours (ideally above the level of your heart).
- Move the fingers or toes around.
- Return tomorrow or whenever advised for a plaster check. Appointment: ____/____/____ at _____.
- Return for a second follow-up appointment in 7 to 10 days.

General rules of plaster cast care

- Movement of the unaffected free joints (e.g. shoulder, elbow, fingers, toes, hip, knee) frequently helps reduce the swelling of the injury.
- Avoid getting your plaster cast wet. If it becomes wet, dry it as soon as possible. A hair dryer is suitable for this. Then return in office hours within 24 hours for a check.
- When having a shower or bath put a plastic bag over the cast and try to keep it out of the water.
- Do not remove the plaster, cut it or modify it.
- Do not put any object under the plaster to stretch it.
- If the plaster becomes soft, very loose or broken, return in office hours within 24 hours.

Pain relief

Pain can usually be relieved by:

- elevating the affected limb
- taking a painkiller such as paracetamol (not a very strong analgesic)
- keeping busy with interesting distractions.

Very severe pain indicates abnormal swelling, so you need to be seen by a doctor immediately.

Elevation

Arm

Have the hand raised so that it is higher than the opposite shoulder level (if possible). The arm can be supported on a pillow or in a sling.

Leg

Raise the foot of the bed and place the plaster cast on a pillow or cushion. You can lie down or sit up, as long as the leg is elevated.

Other useful tips

- The plaster will cause itchiness for a few days, but this will ease.
- For a fractured leg, crutches may be provided, but these are best used after 48 hours of rest.
- The plaster can take up to 2 days to dry, so treat it carefully.
- You should not stand on a leg plaster before 2 days.
- Contact your doctor if you notice a smell or discharge coming from inside the plaster.

Problems caused by swelling

Sometimes the swelling around the fracture will cause the plaster to become too tight. You should return to the doctor or to the emergency department of the hospital immediately if any of the following develop:

- marked swelling of the fingers or toes
- blueness of the fingers or toes
- loss of feeling or numbness in the fingers or toes
- a tight pain not eased by elevation of the limb
- inability to move the fingers or toes.

Polymyalgia rheumatica

What is polymyalgia rheumatica?

Polymyalgia rheumatica (PMR) is an inflammatory rheumatic disorder of older people that affects the muscles of the shoulder and hip regions of the body. 'Poly' means many and 'myalgia' means painful muscle, so it stands for pain in many muscles.

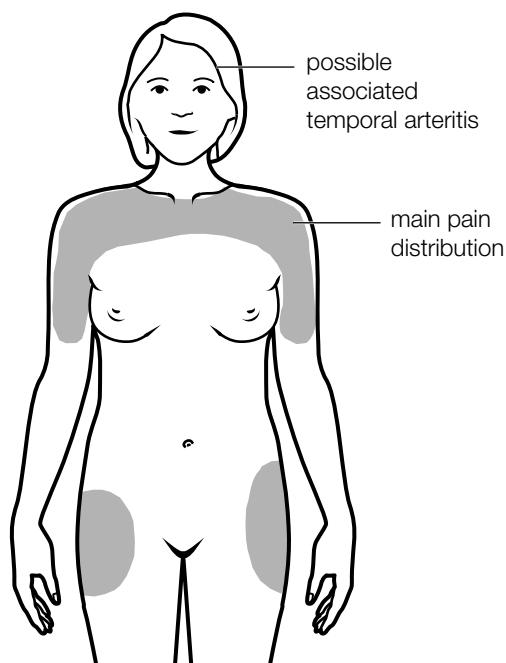
Most people experience aches and pains as they grow older and these usually cause little trouble and respond well to simple pain-relieving medication, but PMR is quite a different matter.

How does it start?

PMR may come on gradually but in many cases it strikes rather suddenly, appearing over 1 or 2 weeks. It sometimes follows immediately after a flu-like illness. Some people describe going to bed feeling fine but waking up the next morning feeling very stiff and sore.

What is the cause?

The actual cause is not known. The experts, who have so far been unable to identify an underlying cause, believe it is an autoimmune reaction of the body against its own muscle tissue. This results in an inflammatory reaction.



Typical distribution of pain

Who gets it?

Older people get it, with the typical age of onset being between 60 and 70 years. It is very rare under the age of 50 years. It affects both sexes but is far more common in women. PMR almost exclusively affects Caucasian people, especially those of northern European background. It appears to be a condition of cooler climates.

What are the symptoms?

Main features are:

- painful early morning stiffness
- muscle aches and pains, especially in shoulders, neck and upper thighs
- stiffness after sitting or inactivity for long periods
- difficulty getting out of bed
- difficulty walking up and down stairs.

Everyday problems are:

- getting out of chairs
- combing hair
- putting on coat
- driving a car for long periods.
- malaise (feeling unwell)
- depression.

There is no weakness, wasting of muscles or arthritis.

How is it diagnosed?

Doctors rely firstly on the typical history, and early diagnosis can be very difficult. There is no specific test but a test called the ESR can pinpoint the diagnosis and give an indication of the progress of the disorder. PMR can be mimicked by the myalgia caused by statin treatment for high cholesterol.

What are the risks?

There are cases where the condition has disappeared over time but it can cause inflammation of arteries, including the temporal artery in the head (temporal arteritis). This has the potential to cause blindness in sufferers so we have to be watchful about this possibility.

What is the treatment?

Fortunately PMR and also temporal arteritis respond very well to cortisone medication. In fact patients feel dramatically better within a day or two of taking the tablets. It is usually necessary to take the medication for PMR for many months. It may be possible to cease after 2 to 3 years. The dose required to control the symptoms is relatively small but there are side effects, which are usually minor. Your doctor will explain these and help to control them.

Self-help measures

- Apply heat, such as warm compresses, to the painful muscles.
- Organise gentle massage to the neck and sore muscles.
- Take mild analgesics such as aspirin or paracetamol for troublesome pain.
- Have a healthy diet; no special diet is required.
- Avoid physical and mental stress.

When to report to your doctor

If you develop any of the following problems:

- disturbance of vision
- throbbing headache
- high fever
- pain in the jaw muscles on chewing
- unexplained symptoms.

Rheumatoid arthritis

What is rheumatoid arthritis?

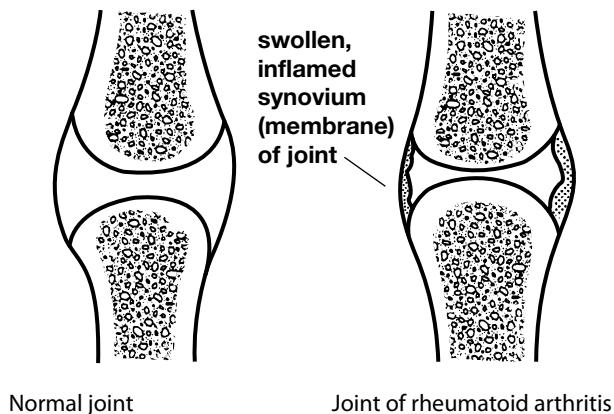
Rheumatoid arthritis is an inflammatory autoimmune disease of the joints, usually the smaller joints of the body. Many people wrongly believe that this is always a disabling, severe condition. In fact, it may be mild and can be well controlled using modern medicine. It is not infectious, but the cause is not known exactly, although it appears that the body's immune system attacks the joints. There is no cure for this condition, but all patients can be treated.

What are the symptoms?

The symptoms will vary a great deal from person to person, as well as from day to day. However, some of the common symptoms include:

- pain and stiffness of the small joints, especially of the wrist, hands and feet (the base of the fingers, thumbs or toes can be affected; less commonly it can affect the larger joints such as the knee, shoulder, ankle and neck)
- tiredness/persistent fatigue
- morning stiffness.

In summary, the main symptoms are pain, stiffness and swelling of the small joints.



How is it diagnosed?

After being suspected by the doctor upon examination, rheumatoid arthritis can usually be diagnosed by tests, including X-rays of the hands and special blood tests.

How common is the problem?

About 2 people in 100 suffer to some extent from rheumatoid arthritis. It is more common in females. Most sufferers are between 40 and 60 years of age, but the disease can affect people in any age group. However, the majority of patients have few or no long-term problems and only 1 patient in 10 is severely affected.

What are the risks?

In severe cases the swollen and deformed joints may become partly or completely dislocated, causing considerable

discomfort and problems with walking if the knee or foot joints are affected. The tendons may become so weak that they can snap. A special problem is the neck, which can become unstable so that manipulative procedures can be dangerous and cause paralysis.

There is an increased risk of cardiovascular disease.

What is the treatment?

Exercise

It is important to keep fit through walking and swimming. Many local councils and physiotherapists offer swimming and other forms of hydrotherapy in heated pools. Home exercise routines to prevent muscle weakening can be provided by your physiotherapist or doctor.

Rest

Rest is important and depends on how you feel. It must be sensibly balanced with exercise. If an exercise causes pain, it should be altered or reduced. Rest when the joints swell.

Joint movement

Each joint affected should be put through a daily full range of motion to keep it mobile and to reduce stiffness. Protect any weakened joints or tendons by lifting gently and smoothly rather than in a jerking motion.

Heat and cold

For stiff joints a hot-water bottle, warm water or a heat lamp can help. For morning stiffness an electric blanket or a warm shower can be helpful. Sometimes cold packs or water are appropriate, for example, over a hot, tender joint.

Diet

There is no special diet. No specific food has caused arthritis and no specific diet will cure it. However, a nourishing and well-balanced diet including adequate fibre and fish will promote health and a sense of wellbeing. Maintain a normal weight to lessen the burden on your joints.

Fish oil (omega-3) has proven benefit.

Medication

There are many effective pain-killing and anti-inflammatory drugs available to treat rheumatoid arthritis. The key drugs are the disease-modifying drugs, especially methotrexate. Your doctor may have to experiment for a time before finding the best drugs for you. Newer, more effective drugs are becoming available year by year.

Surgery

Occasionally surgery may help, if a particular joint is severely inflamed, by removing the inflamed lining called the synovium. In later stages it may be possible to replace a badly damaged joint with an artificial joint.

Smoking

Smoking cessation (if appropriate) is strongly advised.

Support

Excellent leaflets and practical help are available from the Arthritis Foundation in each capital city.

What is sciatica?

Sciatica is a type of neuralgia (nerve pain). The sciatic nerve is a huge nerve (about the size of an adult's small finger) that controls the function of the leg, especially the foot. It passes from the spine into the buttock, then into the back of the thigh and leg.

What causes sciatica?

It is caused by pressure, usually from a prolapsed disc, on the nerve roots from the lower back that form the sciatic nerve. This problem is often called a 'slipped disc', but it is not a good term because the disc is big and only part of it bulges to cause pressure.

Sciatica can be caused also by the nerve roots being trapped in the tunnel at the side of the spine through which they pass. This pinching effect causes the nerve to become irritated and swollen. The tunnel is made smaller by surrounding arthritis or a flattened disc space. This problem is quite common in elderly people.

A rare cause is a haemorrhage around the nerves in people who are taking blood-thinning tablets.

What are the symptoms?

The patient usually feels a burning pain or a deep aching pain in the buttock, the thigh, the calf and the outer border of the leg, ankle and foot. Sciatica is not a pain covering the whole leg like a stocking. It commonly causes a pain around the outer part of the leg into the ankle. The pain may vary from very severe to mild. A 'pins and needles' sensation or numbness may be felt in the lower leg and the foot.

The pain is usually made worse if you sneeze, cough, strain at the toilet or lift something.

What are the risks?

Fortunately most cases of sciatica gradually get better in about 6 to 12 weeks. Sometimes the pressure on the nerve is so great that the leg, especially the foot, becomes weak

and floppy. In such cases, an operation is usually required to relieve the pressure.

Rarely a disc prolapse will cause severe weakness and numbness in the legs, and lack of control of the bladder or bowels. This is very serious and needs urgent attention.

What is the treatment?

Rest

When the pain is acutely severe, it is important to rest lying down for 2 or 3 days if you cannot cope. Rest on a firm mattress or on the floor. However, try to keep as mobile as your pain will allow.

After the acute phase, you should try to return to normal activities. Avoid lifting, bending your back and sitting in soft chairs for long periods.

Medication

Your doctor will prescribe some tablets for your pain and perhaps some tablets to relieve inflammation around the nerve.

Exercises

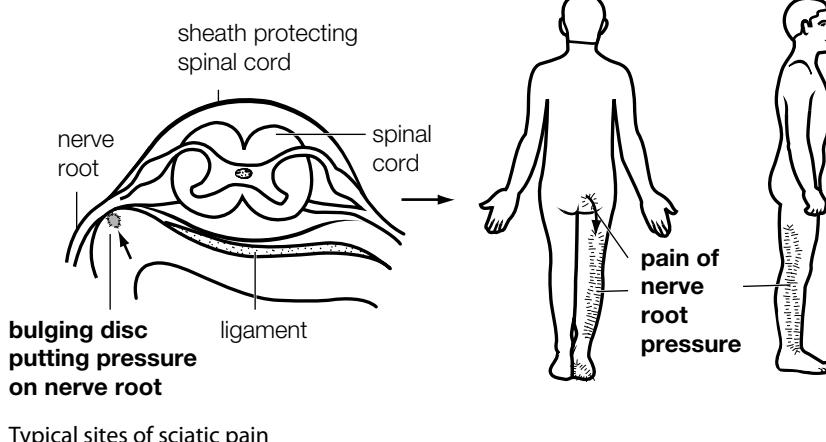
These are very good if you can manage them, and swimming is one of the best. Your doctor will advise you.

Weight control

Being overweight causes added pressure on the spine and nerve. It is helpful to keep to ideal weight.

Other treatments

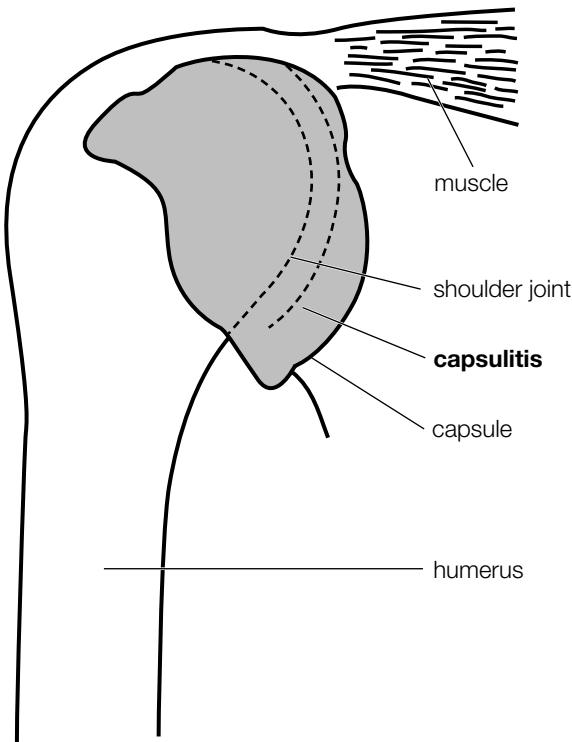
Your doctor could advise traction, gentle stretching or mobilisation of your lower back, or epidural injections to accelerate healing. Some people find electrical stimulation and acupuncture helpful.



Shoulder: frozen shoulder

What is a frozen shoulder?

A frozen shoulder (also known by doctors as adhesive capsulitis) is when so much pain and stiffness develop in the shoulder joint that the affected person finds it difficult to move the shoulder freely. In some cases it is so severe that the shoulder cannot be moved, hence the term 'frozen'. It has nothing to do with temperature.



What is the cause and what happens?

The real cause is not known. What we do know is that inflammation develops within the shoulder joint and adhesions form. These are fibrous bands of tissue that look like cobwebs, develop within 10 days or so and occupy the joint space. The disorder can develop 'out of the blue' without a history of injury or overuse, but sometimes an injury such as a fall onto the shoulder may precede a frozen shoulder. It may follow a period of forced disuse such as after a stroke.

Who gets a frozen shoulder?

It can affect any person of any age but seems to be more common in middle-aged women and young athletes. It is commonly encountered in people with diabetes.

What are the symptoms?

The main symptoms are pain and stiffness in the shoulder, which are slight at first and then progressively get worse. The problem can be considered in four distinct stages:

1. Niggling. Pain, especially at night, but free movement.
2. Freezing. Continuing pain at rest, gradual loss of movement.
3. Frozen. Worse pain both day and night; pain on movement at end of range and with sudden movement.

4. Thawing. Gradual return of movement with less pain.

The pain is a deep, sickly, throbbing ache felt in the shoulder with radiation down the arms and possibly into the neck. It is aggravated by certain everyday movements such as dressing, undressing and combing the hair. The diagnosis is usually confirmed by ultrasound examination.

What is the outlook?

Unfortunately healing is very slow but a complete recovery can be expected even without treatment. This may take 2 years or longer but on average usually takes about 18 months. About one-third of people have some restriction of movement after 3 years but it does not affect their daily activity.

What is the treatment?

It is possible to do nothing except take analgesics for the pain and await recovery. This is a reasonable option especially in milder cases. Very strong analgesics will be necessary in those who have severe pain, especially when it seriously affects sleeping.

Available treatments that can be effective include:

- cortisone injections into the joint
- cortisone tablets
- dilation of the joint with saline fluid
- surgery or arthroscopy to explore the joint and free adhesions.

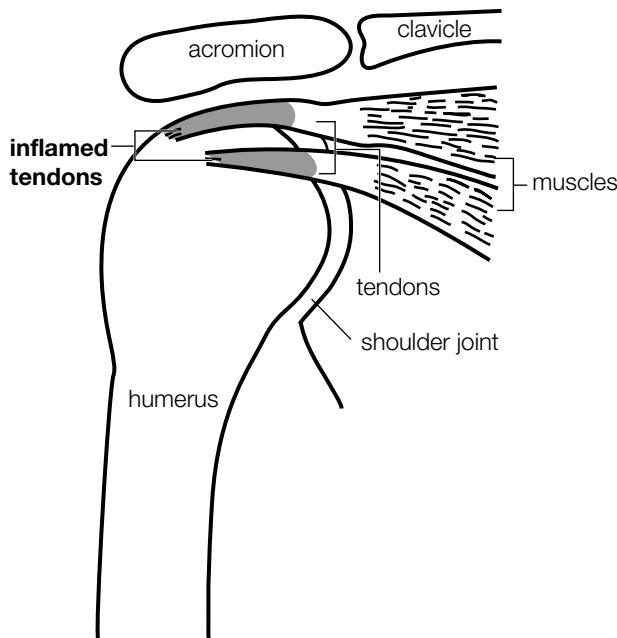
Physical therapy, especially exercises under the supervision of a physiotherapist, assists recovery, especially when the thawing stage commences. It is usually too painful to tolerate during the freezing and frozen stages.

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Shoulder: tendonitis

What is rotator cuff tendonitis of the shoulder?

Rotator cuff tendonitis, which is the most common cause of a painful shoulder, is inflammation with swelling of the three main tendons responsible for movement of the shoulder. These tendons, which arise from the scapular (shoulder blade) and grip the head of the humerus rather like the fingers of a hand, are known as the rotator cuff tendons. When activated they are responsible for rotating the upper arm in the shoulder socket and for raising the arm.



What is the cause of tendonitis?

The tendons work like pulleys in a very confined space and the constant friction of these cord-like structures under the bony arch of the shoulder (the acromion) results in wear and tear with inflammation. Swelling of the tendons causes problems with free movement and pain is the result. This catching under the bone is referred to as impingement. Excessive straining of the shoulder such as a sudden pull (e.g. by a dog on a lead), a fall on an outstretched hand or working under a car can trigger an acute episode. Sometimes calcification, which looks like white toothpaste, develops in the tendon and this makes it extremely painful.

Who gets rotator cuff tendonitis?

It can occur in all ages. Young people, especially athletes who constantly use the shoulder, are prone to get it. This particularly includes swimmers (freestyle and butterfly) and those playing sports requiring throwing and pitching such as baseballers, softballers and cricketers.

What are the symptoms?

Pain in the shoulder and upper arm is the main symptom. The severity of the pain can vary considerably from mild to very severe, depending on the degree of inflammation and swelling. The pain is aggravated by movements such as dressing and undressing, toilet activity, brushing the hair or lying on the shoulder. Lifting the arm out from the side above the level of the shoulder is usually painful and affects sportspeople using overhead activity such as in throwing, swimming and overhead shots in racquet sports. Ordinary X-rays of the shoulder are usually normal (except where calcification is present) but special ultrasound imaging will confirm the diagnosis.

What is the outlook?

Unfortunately recovery is very slow in more severe cases and can take as long as 1 to 2 years to settle, but tendonitis invariably gets better naturally. It is possible to continue normal activities of living. In severe cases, which are complicated by calcification of the tendon, bursitis or tearing of the tendon, recovery may be very slow.

What is the treatment?

Conservative measures are usually used for most cases. This involves avoiding aggravating activity as much as possible and applying cold or hot packs (whichever gives most relief). It is helpful to restrict movements of the arm to the pain-free range only. Massage with an analgesic ointment, cream or gel into the tender area may help. For more painful problems an injection of corticosteroid with local anaesthetic can give great relief. It is advisable to have the help of a physiotherapist to supervise exercises to strengthen the rotator cuff muscles and stabilise the shoulder joint. Sometimes surgery of the shoulder to decompress the tight space between the bones may be necessary to obtain relief.

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Spondylosis

What is spondylosis?

Spondylosis is a condition of the spine in which it is hardened and stiffened by osteoarthritis. It is also referred to as degenerative disease of the spine. The two areas commonly affected are the neck (cervical spondylosis) and the lower back (lumbar spondylosis).

What causes it?

Constant wear and tear and injury to the joints of the spine cause arthritis in the joints, especially the facet joints. The discs, which are like soft rubber shock absorbers between the vertebrae, become hard and stiff as they shrink with age. This causes strains on all the surrounding joints and tissues, leading to stiffness. It is common in people who have worked hard with their backs (such as labourers and farmers) and those who have had injuries (such as in car accidents). The older one gets, the more likely one is to get spondylosis.

What are the symptoms?

Many milder cases cause no symptoms. The common symptoms are stiffness and tenderness in the neck or lower back, especially first thing in the morning or after activity such as gardening or painting.

Cervical spondylosis

This can cause a painful neck with headache and aches and pains in the surrounding areas. The neck feels very stiff, which makes it hard to turn the head around (e.g. while reversing the car). The head can feel like a heavy cannonball.

Lumbar spondylosis

Common symptoms are stiffness and pain in the lower back with poor movements (such as difficulty in bending forwards). Shooting pains in the buttocks and legs are common. There may be pain in the back of the legs after a long walk. This uncommon problem is caused by narrowing of the space inside the spine from overgrowth of the bones (called spinal canal stenosis) due to arthritis and may require an operation.

What is the treatment?

It is important to keep active, but do not overdo the activity. A sensible balance between mild to moderate

exercise and rest is necessary, but it has to be 'played by ear' as each individual is different. You should be able to live comfortably with spondylosis with exercise, following your physiotherapist's advice and taking medication. It is usual for the discomfort to improve with time, although the stiffness remains.

Exercise

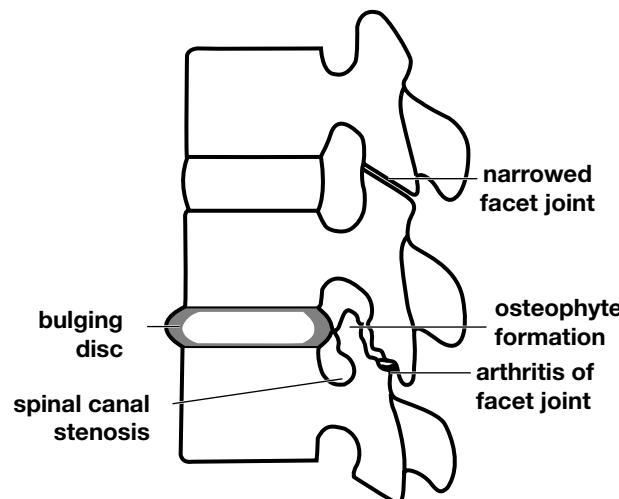
Regular gentle exercise for your neck or lower back will help you. You will be advised by your doctor or physiotherapist about the best exercises for you, but gentle, slow stretching exercises to as far as you can stretch are recommended. Swimming or hydrotherapy will help overcome the stiffness.

Medication

Regular use of mild painkillers such as ibuprofen or paracetamol (recommended) will relieve your aches and pains. Your doctor may prescribe a course of anti-inflammatory drugs, which should be used in moderation.

Diet

There is no proven special diet, although some people find that reduction of dairy products may help. It is advisable to follow a healthy, low-fat, complex carbohydrate diet with the aim being to keep to ideal weight. Being overweight aggravates spondylosis.



Sports injuries: first aid

Muscle strains

You can 'pull' (strain or tear) a muscle if you do not warm up properly before exercising or if you have not done enough pre-season training.

Management of a pulled muscle is based on 'RICE':
Rest—No exercise, no stretching; rest the injured soft tissue of the muscle.

Ice—Apply an ice pack for 20 to 30 minutes every 2 hours while awake during the first 48 hours.

Compression—Keep the muscle firmly bandaged for at least 48 hours.

Elevation—Rest the leg on a stool or chair (or the arm on cushions or in a sling) until the swelling goes.

- If the injury is severe, see a doctor immediately.
- After resting the muscle for a few days, stretching can begin. Warm the area first with an infrared lamp or a hot-water bottle. Then stretch your leg or arm about 5 times to contract the muscle gently. Do this twice each day for 14 days.
- Do not return to sport until the pain and swelling have gone, the muscle is strong and you can move the limb freely without discomfort.

Note

Reusable soft-fabric cold compresses that can be stored in a freezer (at least 2 hours) and dual-purpose hot/cold packs are ideal for the athlete to have always available.

Torn leg muscles

For a damaged hamstring or other leg muscle, begin the stretching by lying on your back with the knee straight. Lift the leg to a level where it just starts to hurt and hold the position for about 30 seconds. Do this twice a day for about 14 days.

Then start more vigorous stretching. Strap a 1.5 kg weight to your ankle, lie on your stomach and lift your foot (bending the knee) so that your heel almost touches your buttock. Repeat 5 to 10 times. Stop if it causes pain; otherwise do this exercise 2 or 3 times a day for 2 or 3 weeks, increasing the weight gradually to 5 kg.

Keep yourself fit with swimming while the muscle is recovering.

Joint sprains

One of the most common injuries in sport is a joint sprain: stress on the joint stretches its lining or ligaments (or both) beyond normal limits. Most often, damage occurs to the knee, ankle and wrist joints, making them swollen, tender and painful to move. Bruising is not always obvious. Again, first aid is based on 'RICE':

Rest—Rest helps prevent the injured area from moving, reducing pain and speeding healing. Use crutches to take the weight off injured joints in the leg.

Ice—Cold will reduce swelling, pain and stiffness. Use a reusable compress or a packet of frozen peas or beans, or wrap ice cubes in a damp tea-towel (or a thin bath towel); never apply ice directly to the skin. Use the ice pack for about 20 minutes every 3 hours for the first 48 hours.

Compression—Compress and support the injury with a firm (not tight) elastic wrap bandage.

Elevation—Elevate the leg on a stool or chair (leg, knee and ankle injuries) or put your arm in a sling (shoulder, arm and wrist injuries) until the swelling goes.

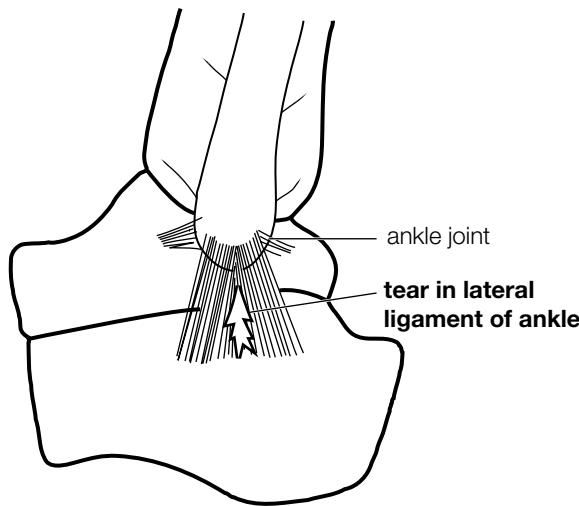
Note

Most minor joint and muscle injuries settle quickly with this treatment. If not, or if the injury was severe, professional assessment and treatment are necessary.

Sprained ankle

What is a sprained ankle?

A sprain occurs when there is damage to the ligaments that bind the bones of the ankle joint. The fibres of the ligament that has been overstretched tear and then bleed. The tear is usually minor, involving a small number of fibres, but sometimes the ligament can be completely torn.



What is the cause?

The cause is a sudden twist of the foot inwards so that the ligaments on the outside of the ankle are overstretched, rather like tearing an overstretched piece of material. Sometimes the inside of the ankle is sprained when the foot twists outwards.

What are the symptoms?

The symptoms depend on the extent of the damage. Pain, swelling, bruising and tenderness of the injured area usually occur and vary from mild to severe. With a complete tear, the ankle joint will go out of shape and feel unstable.

How common is the problem?

Sprained ankles are very common. In an average year, at least 1 person in 50 consults a doctor about this injury.

What is the treatment?

For a mild sprain, self-help measures are usually sufficient. However, a severe sprain requires an X-ray, since there may

be a fracture or a complete tear. Sometimes the discomfort of a sprain settles quickly, but should it persist beyond 3 to 4 days a visit to your doctor is advisable. Your doctor may apply a special strapping.

Self-help

This includes following the 'RICE' formula:

Rest—Rest as much as possible. If the sprain is severe, use crutches to take the weight off the ankle.

Ice—Apply ice packs and/or soak the ankle in cold water to reduce swelling and pain. Use a special reusable compress (e.g. ACE wrap) or a packet of frozen peas or beans, or wrap ice cubes in a damp tea-towel; never apply ice directly to the skin. Use the ice pack for about 20 to 30 minutes every 3 hours when awake for the first 48 hours. (Ice packs can be placed over a bandage.)

Compression—Compress and support the ankle with a firm (not tight) elastic bandage.

Elevation—Elevate the leg on a stool or chair until the swelling goes down.

Exercise program

Exercises started early will help prevent permanent stiffness. Exercise every hour up to the point of discomfort. Do each exercise at least 10 times.

1. Firmly flap your foot up and down at the ankle joint.
2. Rotate your foot inwards and outwards, keeping the foot at right angles to the leg.
3. Combine these exercises so that your foot moves slowly in a circle (clockwise, then anticlockwise).

Painkillers

Take analgesics for pain, especially at night. Paracetamol with or without codeine is usually sufficient.

Walking

Walking with your ankle supported in comfortable walking shoes is recommended for short distances. Walk as normally as possible, but avoid standing still for long periods. Walking without shoes in sand is an excellent way of strengthening your ankle quickly (after the first 2 to 3 days).

What is the outcome?

For most sprains you can expect full recovery in 1 to 6 weeks, but severe sprains with complete tearing take longer, as a plaster cast for 4 to 6 weeks or surgery may be necessary.

Temporomandibular joint dysfunction

What is temporomandibular joint (TMJ) dysfunction?

TMJ is an abnormal movement of the mandible (the jaw bone) in its socket at the base of the skull situated just in front of the ears. It is often caused by dental problems, but in many people there is no obvious cause. Uncommon diseases such as rheumatoid arthritis have to be ruled out.

What are the symptoms?

There is a discomfort or pain in the jaw in front of the ear, especially when eating. A clicking or clunking noise may also occur with movements of the jaw.

Is it a serious problem?

It is an annoying problem rather than a serious problem. Fortunately it responds well to treatment.

What is the treatment?

It is best to try simple methods first before embarking on expensive and sophisticated treatments.

For a very painful problem

The acute problem requires rest and support by following these rules:

- When eating, avoid opening your mouth wider than the thickness of your thumb and cut all food into small pieces.
- Do not bite any food with your front teeth—use small bite-size pieces.
- Avoid eating food requiring prolonged chewing such as hard crusts of bread, tough meat, raw vegetables.
- Avoid chewing gum.
- Always try to open your jaw in a hinge or arc motion. Do not protrude your jaw.
- Avoid clenching your teeth together—keep your lips together and your teeth apart.

- Try to breathe through your nose at all times.
- Do not sleep on your jaw—try to sleep on your back.
- Practise a relaxed lifestyle so that your jaws and face muscles feel relaxed.

For a nagging problem

Once the acute phase has settled, it is best to strengthen the muscles and joints by performing a set of exercises. They are uncomfortable at first, but the problem usually starts to settle after about 2 weeks.

'Chewing the wood' exercise

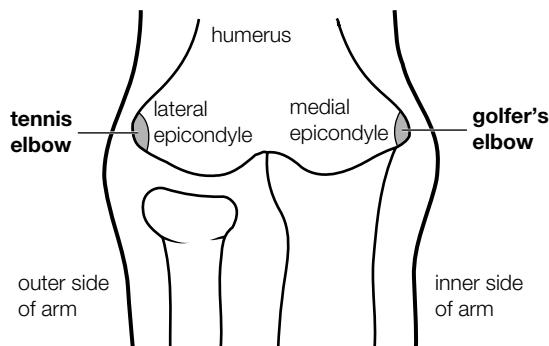
- Obtain a rod of soft wood about 15 cm long and 1.5 cm wide. An ideal object is a large carpenter's pencil.
- Position this at the back of the mouth so that the molars (back teeth) grasp the object with the jaw thrust forward.
- Rhythmically bite on the object with a clenching movement for 2 to 3 minutes. Do this at least 3 times a day.



Tennis elbow

What is tennis elbow?

Lateral epicondylitis ('tennis elbow' or 'backhand tennis elbow') is inflammation of an important forearm muscle tendon at the point of attachment to the outer side of the elbow bone. Tennis players are not the only sufferers. It is common in golfers, carpenters, bricklayers, violinists and homemakers, especially those between 35 and 55 years of age.



Anatomy of the elbow

What causes it?

Tennis elbow is the result of repeated bending and twisting movements of the arm, such as when playing golf and tennis, using a screwdriver, wringing wet clothes, carrying buckets or picking up bricks. It affects tennis players who use a lot of wrist action in a faulty backhand movement, especially when they are unfit. The force of the ball hitting the racquet is greater than the strength of the muscle; the muscles of the forearm thus become overstrained. The strains, initially painless, cause small tears in the tendon. As they start to heal, more tears occur and painful inflamed scar tissue forms.

What are the symptoms?

The outer bony projection of the elbow (the lateral epicondyle) is painful. For some people the pain is constant and can interfere with sleep.

The forearm aches with grasping and lifting movements such as pouring tea, turning stiff handles, ironing clothes and typing. Even simple things like picking up a glass, shaking hands or brushing teeth can cause pain.

What is the treatment?

Tennis elbow is stubborn to treat but almost always curable. The two bases of treatment are:

- rest (avoiding the cause, e.g. stop playing tennis)
- exercise (to strengthen the forearm muscles, which bend the wrist).

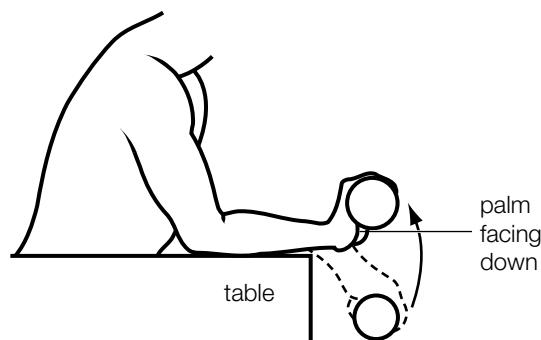
Your general practitioner might recommend a cortisone injection to speed recovery. Sometimes it can take 1 to 2 years to heal. A course of anti-inflammatory drugs is worth a trial—take for 2 to 3 weeks before reviewing their effect.

Exercises

Use a dumbbell or similar type of weight such as a bucket of water. Start with 0.5 kg (1 lb) and build up gradually to 5 kg.

1. Sit in a chair beside a table.
2. Rest your arm on the table so that the wrist is over the edge.
3. With your palm facing downwards, grasp the weight.
4. Slowly raise and lower the weight 12 times. Rest for 1 minute.
5. Repeat twice.

Do the exercise every day until you can play tennis, work or use your forearm without pain.



The dumbbell exercise

The towel-wringing exercise

This hurts at first, but usually cures the problem by 6 weeks. Roll up a handtowel and, with your arms straight, grasp the towel, then wring it slowly so that your wrist is fully bent forwards. Hold for 10 seconds, then reverse the wringing action to extend your wrist; hold for 10 seconds. Gradually increase the time by 5 seconds until you can hold for 60 seconds. Do this twice a day, twice in each direction. Many people prefer to do this exercise using a large face washer while showering.

Tennis

Do not use a tightly strung, heavy racquet or heavy tennis balls. Keep your strokes smooth and try not to bend the elbow. Start the game quietly, taking time to warm up to it.

The 'other' tennis elbow

Medial epicondylitis ('forehand tennis elbow', 'golfer's elbow' or 'pitcher's elbow') is less common and usually less severe. The treatment is the same, but the palm must face upwards for the dumbbell exercise.

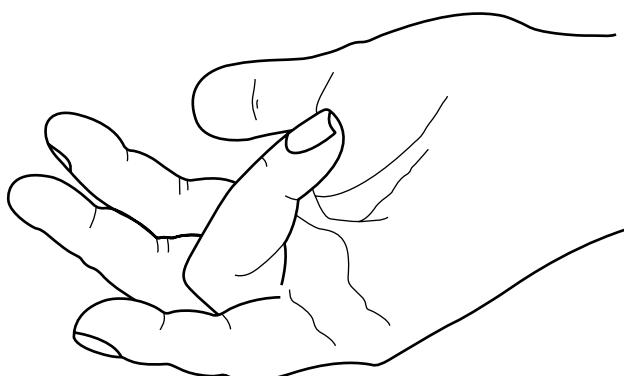
Armbands

Some tennis players use a non-stretch band or brace around the arm, about 7.5 cm (3 inches) below the elbow. You might not find it helpful, but it is worth trying. Bands are available from (some) pharmacists, tennis shops and orthopaedic appliance firms.

Trigger finger

What is a trigger finger?

Trigger finger is a finger or thumb that has become locked after it has been bent (flexed) because the straightening (extending) mechanism is jammed for several moments. When it is straightened to its normal position, it snaps into position with a sudden jerk. Also known as stenosing flexor tenosynovitis, it affects about 2 to 3 in every 100 people. Although all fingers can be affected, the thumb and the ring fingers are most commonly affected.



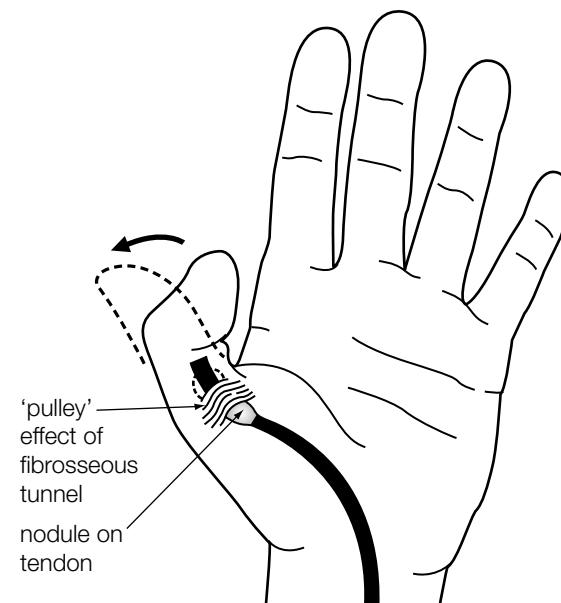
Trigger finger occurs when the finger becomes locked

What are the symptoms?

- The finger gets stuck and locked in the palm of the hand.
- It can be straightened with the other hand.
- Tenderness, sometimes pain, occurs at the base of the finger.
- A nodular thickening can be felt at the base of the finger.
- There is a sensation of a crackling 'leathery' sound on finger movement.

What is the cause of trigger finger?

The problem is caused by a mechanical obstruction to the smooth gliding of the involved finger tendon. The tendon that attaches the muscle to the last phalanx bone is covered by a synovial sheath that protects and lubricates it. For some reason, presumably constant wear and tear, the tendon sheath becomes inflamed, causing swelling and thickening. This eventually leads to the formation of a firm nodule that obstructs the free movement of the tendon, which triggers back and forth over the nodule. The system can be compared with a sleeve (the sheath) covering an arm (the tendon), so that when the sleeve becomes knotted the arm tends to get stuck.



A nodule on the tendon in the finger (or thumb) obstructs its movement: trigger thumb shown here

Who gets a trigger finger?

Any person can develop it and most cases occur for no apparent reason in healthy people. It is more common in people over the age of 40 years and in females. The main risk factors, in addition to increasing age, are rheumatoid arthritis, diabetes, amyloidosis and being on dialysis.

What is the treatment?

Your doctor will discuss the following options with you:

- No specific treatment. Some cases improve without any treatment, especially if the hand is rested from any repetitive physical activity. Some people feel that they can live with the problem, especially if it is a milder form, and many do so.
- Splinting. This may involve strapping a plastic splint, similar to that used for carpal tunnel syndrome, to keep the finger straight, especially during the night.
- Corticosteroid injection. This effective treatment involves injecting corticosteroid (cortisone) with local anaesthetic into the tendon sheath. This can reduce inflammation, soften the nodule and thus relieve the obstruction. It works in about 8 out of 10 cases and can be repeated if the condition returns.
- Surgery. A simple operation can be performed under local anaesthetic that involves opening the tendon sheath at the level of the nodule and incising the nodule.

Warm-up exercises for the legs

The aim of the warm-up period for all athletes is to ensure top performance and reduce the chance of injury, especially early in a sporting event.

- The warm-up should begin with 10 minutes of slower, easier activity such as slow jogging, running on the spot, skipping or cycling.
- The stretching exercises should be gentle at first and should not overstrain, tire or be painful.
- The leg exercises are in addition to general exercises for other parts of the body.
- Ideally, a tracksuit should be worn.

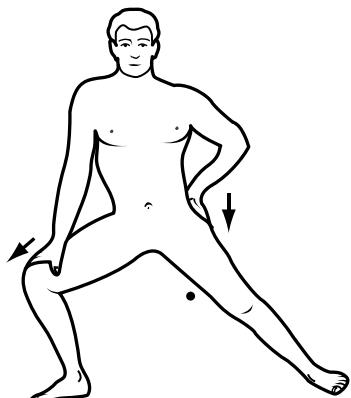
The exercises

The drawings illustrate stretches for the left leg. Stretch until the muscle just begins to feel tight (stretch point). It is important to hold the stretch position for 20 to 30 seconds, relax for 10 seconds and repeat each exercise for each leg. The stretching program should last 10 to 20 minutes. A practical program is to perform each exercise 2 or 3 times on each leg.

Hip stretching

Adductors

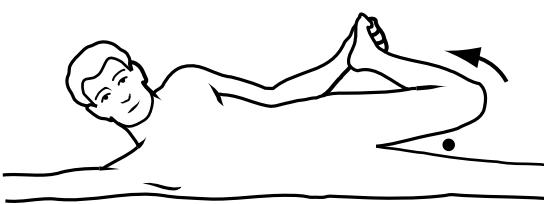
Stand with your feet apart. Bend one knee while keeping the other straight. Bend until a stretch is felt in the groin and inner thigh (stretch point).



Adductor stretch

Flexors (iliopsoas)

Lie on your side. Grasp the ankle of the uppermost leg with your hand. Pull the ankle backwards and slightly to the side.

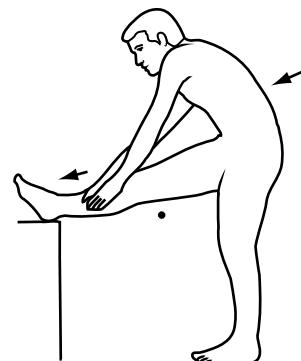


Flexor stretch

Thigh stretching

Hamstrings

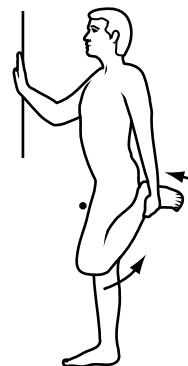
Place the heel of the right leg on a low table or chair. Keep the knee straight. Reach forwards with both hands until you reach stretch point.



Hamstring stretch

Quadriceps

With one hand supporting the body, grasp the ankle with the other so that the foot is pulled up towards the buttock until you reach stretch point.



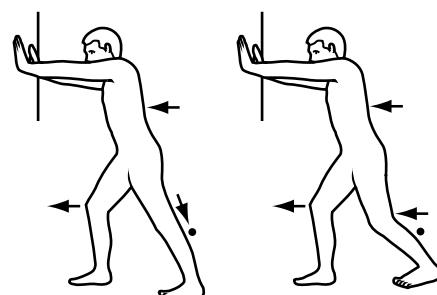
Quadriceps stretch

Calf/Achilles tendon stretching

Calf muscles

1. Stand about 1.5 m from the wall and lean against it. Keep your left knee straight and your left foot flat on the floor. Bend your right knee forwards until you reach stretch point.
2. Stand in a similar position, but bend the left knee so that a stretch is felt deeper and lower in the leg.

It is very important to warm down by repeating the gentle stretching exercises and jogging for several minutes after sporting activity.



Calf muscle stretch 1 Calf muscle stretch 2

What is whiplash?

Whiplash is the term applied to a sudden injury of the neck when the neck is 'whipped backwards' forcibly in an accident. It usually occurs in motor vehicle accidents but can occur in contact sports such as football and other similar accidents. It is a term that doctors prefer not to use now, instead referring to it as an acceleration hyperextension injury.

How does it occur in motor vehicle accidents?

In a rear-end collision, your head is thrown back into overextension and then bends sharply forwards on the rebound. This is commonly called a whiplash injury, but it is really an overextension injury.

Three out of 4 people involved in rear-end collisions do not experience neck symptoms.

If your car collides with a stationary object, your head bends sharply forwards at first and then rebounds backwards. This results in a similar injury to the neck.

What happens to the neck?

The structures that are usually injured include the bones of the cervical spine and the soft tissues such as ligaments, muscles, tendons, discs and nerves. The ligaments that bind the vertebrae together are stretched and possibly torn, rather like a sprained ankle. Some bleeding occurs into the ligaments.

The many small joints of the neck (facet joints) are jarred and bruised. Small stress fractures may occur in the cervical spine.

Note: Plain X-rays do not usually show this damage to the bones, joints and soft tissues.

What are the symptoms?

The main symptoms are pain and stiffness in the front and back of the neck that develop either immediately or later. This may be up to 24 hours or even 2 to 3 days later.

Other possible symptoms are:

- headache
- difficulty lifting the head, as it feels too heavy for the neck
- pain, tingling or weakness in the arms
- dizziness
- nausea
- difficulty or soreness swallowing

Apart from a sore neck there is a tendency to feel flat and depressed for about 2 to 3 weeks. Talk to your doctor about this feeling if it persists.

Note: The symptoms are usually worse if there is pre-existing osteoarthritis of the spine.

What is the outlook?

The outlook is invariably good, with every chance of a normal recovery, which can take anything from 1 to 2 weeks up to

about 3 months. A better outcome is obtained with good treatment but recovery will not be speeded up by repeated X-rays or wearing a cervical collar.

What are the preventive issues?

The following make accidents more likely:

- bad driving habits such as 'tailgating'
- driving in wet or icy weather
- driving under the influence of alcohol or other drugs, including prescribed mind-altering drugs.

The following reduce the risk:

- good, careful defensive driving
- not drinking and driving
- padded headrests in your motor vehicle
- good stoplights, including rear window lights.

Note: Ask your doctor about any drugs you are taking.

What is the treatment?

Your neck needs time to heal, just like a sprained ankle. Physiotherapy-supervised treatment is very helpful.

Self-help

- **Cold/heat.** Apply ice/cold packs to the neck for about 10 to 20 minutes regularly during the first 3 days, then apply heat. The heat includes very warm small towels, hot showers (twice a day) and heat packs about 4 times a day for 10 to 15 minutes.
- **Exercise.** The best treatment is exercising your neck as soon as possible, even though it feels stiff and tender. This also includes moving your head around as usual in your normal daily activities but avoiding heavy lifting and overexertion. Your doctor or therapist will advise on the best exercises. Any slow, deliberate stretching of your neck is good.
- **Mobilisation and manipulation.** The gentler mobilisation therapy is helpful but manipulation of the neck is not generally recommended. Massage is helpful.
- **Painkillers.** If pain is a problem the best first-line option is to take paracetamol every 4 to 6 hours.
- **Cervical collar.** Supporting your neck with a therapeutic collar with the back higher than the front can provide comfort but the less time in it the better (e.g. 2 to 3 days). Keep the neck in a slightly bent forward non-painful position. Discard the collar as soon as possible and start moving your neck.
- **Pillow.** Sleep with a very flat pillow, a small towel rolled to about 5 cm thickness or a cervical pillow (best option). Inappropriate sleeping positions delay healing.

Medication

Your doctor may prescribe a short course of anti-inflammatory tablets or muscle relaxants to make your neck more comfortable, or organise injections of local anaesthetic.

Wry neck (torticollis)

What is a wry neck?

An acute wry neck is the sudden onset of severe neck pain accompanied by spasm of the neck muscles causing the neck to bend or twist away from the painful side. This common deformity, which usually occurs on one side of the neck, is a protective reaction of the body to safeguard the neck. Wry neck is also referred to as torticollis.

What is the cause of wry neck?

We do not know precisely the basic cause of a wry neck, which may be the result of a minor injury or simply sleeping with the neck in an unusual position. It appears that the cause seems to be an injury to one or more of the facet joints. It is as though these joints become jammed or locked, rather like a door jamming on its hinge. The result is painful protective muscle spasm. Sometimes a wry neck can be caused by an inflammation of the lymph glands in children.

What are the symptoms?

The main symptom is severe pain localised to the middle or more usually on one side of the neck. The pain can be referred to the head or to the shoulder region. The neck feels 'stuck' in one position and any attempted movement to free it usually results in sharp spasms of pain.

Who gets a wry neck?

Anyone can get a wry neck but it occurs typically in young people between 12 and 30 years of age. Many parents are surprised that their children can suffer from such a problem, especially as it comes 'out of the blue', but this is a well recognised fact.

What is the outlook?

Fortunately an acute wry neck is a transient and self-limiting (i.e. it gets better naturally) condition which can recover in 24 to 48 hours. Sometimes the problem can last for a week or so. There are usually no risks or complications. However, neck problems can return, so follow-up treatment is recommended.

What is the treatment?

There are a variety of treatments on offer from several different schools of therapy, but it is important to remember that most cases get better quite quickly even without special treatment, so conservative management is advisable.

Self-help

- Analgesics. Take a mild painkiller such as paracetamol for 2 to 3 days to help with your discomfort.

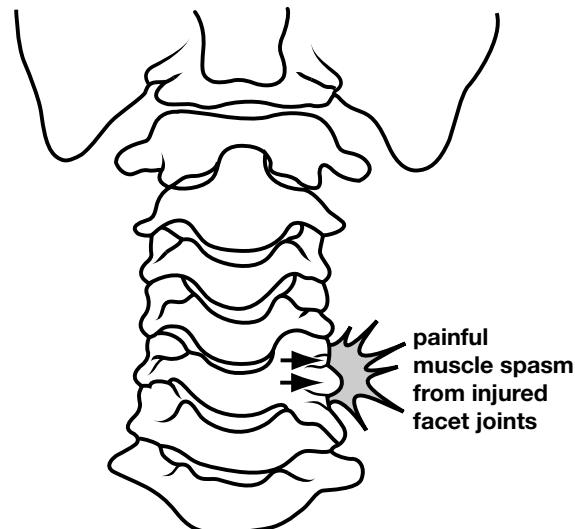
- Heat and massage. The application of a cold pack or heat in the form of a hot face washer or heat pack to the painful area should be therapeutic. Massage using an analgesic balm is also recommended to relieve symptoms.
- Sleeping and pillows. Sleep with your painful side on a low, firm pillow. Avoid sleeping on too many pillows.
- Exercises. Keep your neck mobile within your comfort zone. Gentle exercises aids a more rapid recovery.
- Posture. Keep a good posture, including keeping your chin tucked in and keeping your neck upright in a vertical position for tasks such as reading and writing.
- Driving your car. Driving your car during the initial period of a wry neck should be avoided, since the inability to get full rotation of the head to view traffic is hazardous.

What about a cervical collar?

Collars can provide support and comfort for a short period for acutely painful necks but they are not generally recommended. Your neck is best kept mobile and exercised naturally by normal use.

What about physical therapy and manipulation?

Spinal manipulation is inadvisable because of protective muscle spasm. However, some physical treatments that provide excellent relief include gentle mobilisation and a therapy called muscle energy therapy, which is the best method if available. Ask your practitioner about it.



Site of pain in wry neck

Adrenaline autoinjector use

What is an adrenaline autoinjector?

An adrenaline autoinjector is an emergency device that can inject life-saving adrenaline promptly in emergency situations. It is used to treat severe allergic reactions, known as anaphylaxis, which may follow an insect bite or eating a certain food. There are two currently available commercial preparations—the Anapen and the EpiPen—each has a slightly different method of injection into the thigh, and both come in adult and child (Junior) versions. School-age children usually need the full-strength injector.

What is an Anaphylaxis Action Plan?

If you have an autoinjector, you must have an Anaphylaxis Action Plan signed by your doctor.

The plan

Use an autoinjector if the following symptoms develop:

- Difficult or noisy breathing
- Wheeze or persistent cough
- Swelling of tongue
- Swelling, tightness, itchiness in throat
- Difficulty talking and/or hoarse voice
- Persistent dizziness or fainting
- Pale and floppy (young children)

Dose

- Adult and child weighing more than 30 kg: 300 mcg
- Child 15–30 kg (usually 1–5 years): 125 mcg

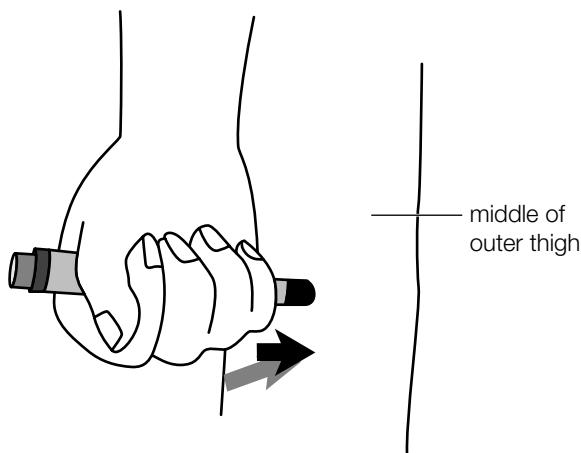
The four step use of the autoinjector (pen)

Step 1

- Remove the pen from its container.
- Then remove the safety cap from the end of the pen (pull it—don't twist).
- Ensure that your thumb is closest to the cap end and not over the sharp end of the pen.

Step 2

- Hold the pen tightly in the palm of your hand with the needle tip down.
- Place the needle tip gently against the middle of the outer thigh, in the 'fleshiest' part of the muscle (with or without clothing). It should be perpendicular (at a right angle of 90°) to the thigh.



Where to place the autoinjector (EpiPen shown)

Step 3

- Push down hard against the thigh until you hear or feel a 'click' (in the case of the EpiPen) or for the Anapen, press the red button until it clicks.
- Hold in place for 10 seconds.

Step 4

- Remove the pen from the thigh.
- Place it back in its plastic container with the needle pointing down.
- Be careful not to touch the needle.
- Massage the injection site for 10–20 seconds.
- Apply firm pressure with a clean cloth.
- Record the time it was given.
- Call an ambulance.

Rules for an autoinjector (pen)

- Never put thumb, finger or hand over the needle tip.
- Don't touch the needle.
- Do not inject into the buttock.

Alcohol: harmful use of alcohol

What is 'problem drinking'?

People are said to be dependent on alcohol when it is affecting their physical health and social life yet they do not seem to be prepared to stop drinking to solve their problems. The national Australian guidelines define excessive drinking as follows.

Guidelines to reduce health risks from drinking alcohol (NHMRC) 2009

- For healthy men and women, no more than two standard drinks on any day reduces the lifetime risk of harm.
- No more than four standard drinks on a single occasion reduces risk of harm arising from that occasion.
- Children and young people under 18—not drinking is the safest option.
- Pregnant and breastfeeding women—not drinking is the safest option.

Long-term

High-risk or harmful drinking occurs at more than 6 drinks a day for men and 4 drinks a day for women.

Measuring your alcohol intake

One standard drink contains 10 g of alcohol, which is in 1 middy (or pot) of standard beer (285 mL), 2 middies of low-alcohol beer or 5 middies of super-light beer. These are equal in alcohol content to 1 small glass of table wine (120 mL), 1 glass of sherry or port (60 mL) or one nip of spirits (30 mL).

- 1 stubby or can of beer = 1.3 standard drinks
- 1 × 750 mL bottle of beer = 2.6 standard drinks
- 1 × 750 mL bottle of wine = 6 standard drinks



1 middy
of standard beer
(285 mL)



1 glass
of wine
(120 mL)



1 glass
of sherry or port
(60 mL)



1 nip
of spirits
(30 mL)

Standard drinks

The 0.05 level

To keep below 0.05 blood alcohol level, a 70 kg man or woman should not exceed:

- 2 standard drinks in 1 hour
- 3 standard drinks in 2 hours
- 4 standard drinks in 3 hours.

What are the risks?

Heavy drinking damages the body; it may damage all the organs of the body, but will especially damage the liver, stomach, heart and brain. It will cause high blood pressure, gout and pancreatitis (inflamed pancreas). One serious effect is that some drinkers have blackouts of memory; others have blackouts during heavy drinking bouts only. At least 15% of all patients admitted to hospital have an alcohol-related illness and about 50% of fatal traffic accidents involve alcohol. It is a special problem for pregnant women, whose babies can be abnormal: more than 1 drink a day places the baby at risk.

Alcohol also interacts badly with many prescribed medicines, especially sedatives.

How can you get help?

If you experience problems related to drinking, cut down on the amount and frequency of social drinking. If you find this impossible, seek help without delay—you cannot fight it alone. When you attempt to stop, withdrawal symptoms may be a problem.

Get in touch with your family doctor or your nearest branch of Alcoholics Anonymous or Alanon. Some cities have direct telephone drug and alcohol services. The only way to solve the problem is to realise you have one, admit to it and then do something about it. Experience has shown that the key to success is to quit altogether, and for this reason the help of your family, your doctor and a caring organisation such as Alcoholics Anonymous is essential.

Golden rules to avoid hazardous drinking

- Do not drink daily.
- Aim for less than 12 standard drinks per week for men and 8 for women.
- Have at least 3 non-drinking days per week.
- Change to low-alcohol beer.
- Avoid drinking on an empty stomach.
- Avoid high-risk situations (e.g. constant parties).
- Mix alcoholic with non-alcoholic drinks.

What are the symptoms?

The possible symptoms or signs are as follows.

Adverse psychological and social effects	Physical effects
loss of self-esteem	brain damage (if severe)
irritability	depression
deviant behaviour	insomnia—nightmares
anxiety	hypertension
paranoia	heart disease
stress	liver disease
relationship breakdown	dyspepsia (indigestion)
poor work performance	stomach ulcers
financial problems	sexual dysfunction
accidents	hand tremor
driving offences	peripheral nerve damage
crime—violence	gout
personal neglect	obesity

Amphetamines

What are amphetamines?

Amphetamines are synthetic (not natural) stimulant drugs that can speed up the activity of the brain. They have legal and illegal uses. They can be used legally by the medical profession, where pharmaceutical company preparations are used to treat disorders such as narcolepsy and attention deficit hyperactivity disorders. They were used routinely in World War II to keep troops active and awake during battle. It was reported that Adolf Hitler was given intravenous injections of methamphetamine by his doctor.

Illegal amphetamines are prepared in 'backyard' laboratories to sell on the streets, but they are of mixed and doubtful quality. Pseudoephedrine and ephedrine are drugs that can be used in their manufacture.

What are the illegal amphetamines?

The most common type is methamphetamine, which comes in three main forms:

- speed—the most common, which is a powder
- base—an oily or waxy paste
- ice—crystal methamphetamine.

Another form of amphetamine is ecstasy (MDMA), which comes as a tablet.

What are typical slang (street) names for these illegal drugs?

Roses, dexies, speed hearts, pep pills, go-ee, uppers, purple hearts, crystal M, glass, crank, whiz, shard, ice, meth, go-fast, poor man's cocaine

How is methamphetamine taken?

The various preparations can be smoked, injected, 'snorted' through the nose or taken by mouth.

What are the effects of amphetamines?

The effects vary from one person to another and depend on the strength of the dose, the chemical additives and the physical health of the user.

Some of the immediate effects include:

- a burst of energy, making the user restless and talkative
- aggressive and overactive behaviour
- giggling and silliness
- confused thinking with impaired judgement
- increased libido
- jaw clenching
- thirst
- psychotic symptoms such as paranoia and hallucinations
- rapid pulse and high blood pressure
- extreme fatigue
- dilated pupils.

In small doses amphetamines can overcome tiredness and make the user feel alert and refreshed, hence the term 'pep pills'. However, a 'speed crash' invariably follows the high and may leave the person feeling nauseated, flat, depressed and exhausted. As a rough guide, methamphetamines can be detected in the blood for about 4 to 8 hours after use and in the urine for 3–4 days.

What are the dangers of amphetamines?

Excessive amphetamine can cause high blood pressure and heart disturbance, which can result in death from an overdose. It can cause a psychosis, including hallucinations, paranoia and other symptoms similar to schizophrenia. Other mental effects include mood swings, depression and panic attacks.

Its use can impair judgement and contribute to accidents, particularly on the road.

Aggressive behaviour with a tendency to violent rages, which may occur on drug withdrawal, can lead to criminal charges.

What are the warning signs of overdosage?

These include increasing agitation, extreme anxiety, chest pain, fever, paranoid delusions, hallucinations and possible seizures.

What are the withdrawal effects?

Withdrawal symptoms can include tiredness, disturbed 'cranky' behaviour, panic attacks, extreme hunger, depression and nightmares.

What are the long-term consequences?

Regular dependence can lead to:

- malnutrition because of appetite suppression
- reduced immunity
- damage to brain cells
- tendency to anxiety with panic attacks
- sensation of bugs crawling under skin leading to sores from 'picking' imaginary bugs: 'meth bites'
- amphetamine psychosis similar to schizophrenia
- mood swings and depression
- rampant dental cavities and gingivitis, termed 'meth mouth'
- need to use other drugs such as sleeping tablets
- aggressive antisocial behaviour.

The serious effects of the above on personal and family life include:

- relationship issues (e.g. arguments and break-ups)
- impacts on work or study (e.g. trouble concentrating, with reduced performance)
- conflict with the law (e.g. being apprehended for possession and use, violence or crimes committed to support use)
- financial problems (e.g. debt from job loss or money spent on drugs).

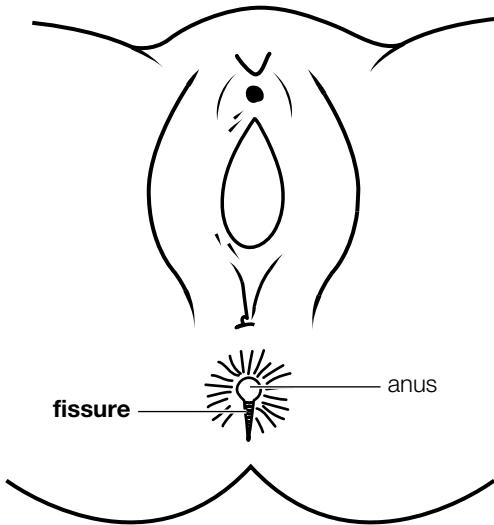
Important things to remember about amphetamines

- They are psychostimulant drugs that speed up the brain and body in an unnatural way.
- Long-term use can damage the brain and lead to a psychosis, malnutrition and irrational or violent behaviour.
- It is illegal to make or sell amphetamines and possess them.
- For help, including suspected overdose, call your doctor, drug treatment services or hospital.

Anal fissure

What is an anal fissure?

An anal fissure is a crack or tear at the margin of the anus that extends from the skin into the soft lining of the anus. It can affect all ages and tends to occur in women and infants.



What are the symptoms?

- Sharp, often severe pain on opening the bowels
- Pain or discomfort when sitting on a hard surface
- Spots of blood on the toilet paper or underwear

When the bowels are opened, especially for a hard or large stool, the fissure causes spasm of the circular muscle that controls the anus. The resultant pain can last for several minutes and up to an hour.

What causes an anal fissure?

The tear, which is generally small, usually develops after stretching of the anus from passing a hard, large stool. It is associated with constipation, multiple pregnancies and Crohn's disease. Anal intercourse increases the likelihood of a fissure.

What about infants?

Anal fissures in children usually occur with constipation, and possibly result in refusal to defecate. Recovery usually

occurs quickly if the stool is softened. Maltogen 1% can be added to the formula, and fluids should be increased. Treatment includes applying a local anaesthetic ointment to the anus whenever the child shows a desire to defecate, until healing occurs.

What is the usual outcome?

Adults usually recover in about 4 weeks, especially if the fissure is small. More severe cases may not heal without the benefit of a small operation.

How can anal fissures be prevented?

The secret is to avoid constipation and answer nature's call to defecate when it comes instead of putting it off. Stools are kept soft by drinking several glasses of water each day, by a high-fibre diet and by regular exercise. Some people may find it necessary to use laxatives such as ispaghula (Fybogel, Agiolax).

What is the treatment?

- Prevent constipation; keep the stools soft.
- Gently clean the anus with cottonwool and warm water after each bowel movement.
- Apply a towel soaked in very warm water for painful spasm or take a sitz bath (20 cm of warm water with a small amount of added salt in the bathtub) for about 20 minutes twice a day.
- Take analgesics such as aspirin or paracetamol for pain.
- Apply petroleum jelly (Vaseline) or zinc oxide ointment around the anus to soothe the area.
- A special ointment containing local anaesthetic or a dilute version of ointment used for angina (Rectogesic) may be prescribed by your doctor to relieve discomfort. It is prone to cause strong headaches.
- A modern technique is to inject botulinum toxin into the sphincter. You can discuss this with your doctor.

Surgical treatment

If the fissure persists despite all the above attention, some minor procedures will certainly allow it to heal quickly in a few days. This may involve stretching the anus under anaesthetic or cutting the anal sphincter (muscle) under local anaesthetic.

Anger management

What is anger?

Anger is a normal and powerful emotion, common to every human being. There is an enormous variation of expression from mild irritation to intense fury and rage. It can be caused by both internal events, such as worrying over personal problems, or by external events such as conflict with a particular person or an annoying event such as a traffic incident or cancelled flight. The problem of 'road rage' is a classic example of uncontrolled anger, which may include both internal and external elements. Anger, which may be concealed or obvious, might be a communication of inner fear and insecurity.

Why are some people more angry than others?

It is a fact that some people are more 'hot headed' than others and have a 'short fuse'. Some of these people may have an antisocial personality disorder while in others an angry disposition can be explained by hereditary or cultural factors. People with a low frustration index feel that they are special and should not have to cope with inconvenience or irritations. People who are easily angered tend to come from families that are dysfunctional, disturbed or have poor communication skills. However, other people (including some from feisty families) seem to take annoying things in their stride and keep calm.

What are the effects of anger?

Recurrent episodes of anger can affect your health in many ways—socially, emotionally and physically. Uncontrolled anger can inevitably lead to inappropriate conflicts, such as arguments, assault, physical fights and physical abuse. The body's response of releasing high levels of stress hormones and substances like adrenaline can cause unhealthy consequences, such as insomnia, anxiety, depression, headache including migraine, high blood pressure, heartburn, irritable bowel syndrome and even fatal heart attacks and stroke. You cannot afford to let anger get the better of you and you should do something about it if it is affecting your life. It is particularly important to overcome a response of aggressive behaviour as an expression of your anger.

What should you do?

People prone to anger should 'take a good look at themselves' and try and work out why they feel that way, what provokes the 'attacks' and what methods they consider help them to cope with the emotion. It would be helpful to keep a diary about outbursts, precipitating events or incidents, reactions, feelings, bad aspects, positive aspects or outcomes. Then you

should seek help from a person you can trust, such as your doctor, a psychologist or psychiatrist, counsellor or religious advisor (if applicable). Many of these professionals are trained in techniques of anger management, including relaxation techniques, problem solving, and cognitive behavioural therapy. Remember that anger can be suppressed and then converted or redirected. Take your suggested ideas and possible remedies to the counsellor. Many people who are normally well controlled become uncontrolled with excessive alcohol, so it is vital for these people to avoid alcohol or limit their alcohol intake.

What are better practical ways to express anger?

Learn to relax by channelling your energy into safe and acceptable practices, for example:

- go for a long walk or run
- sit quietly in a park or other pleasant place
- go to the movies or watch a video/DVD
- share any problem with someone you trust
- go to a coffee shop with a friend
- listen to your favourite music
- play your favourite sport or learn a new sport
- go swimming or surfing regularly
- take a long bath, spa or sauna
- take up a gymnasium membership
- take up yoga, tai chi or similar activity
- meditate or pray (if applicable).

If you feel an attack coming on, punch a pillow or kick a ball around outside. If you feel out of control, walk away from the situation and cool down.

How do you resolve arguments?

It is good for your health and your personal relationships to deal with arguments in a sensible and mature way. In a non-threatening and appealing way, tell the person how you feel with a line such as 'I find myself getting hot under the collar with this situation and it's not good for both of us. I don't want my emotions to spoil our relationship, so we need to resolve this so we can walk away feeling okay with each other'. Sometimes it may be good to have a third person to act as a mediator and calming influence.

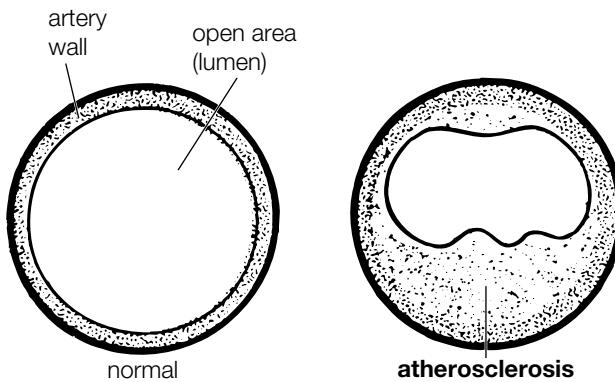
Helpful tips

- Avoid arguments.
- Avoid situations that tend to provoke anger.
- You cannot afford to get violent.
- Learn to express your anger safely.
- Learn relaxation techniques such as meditation or yoga.
- Avoid alcohol or other substances that may affect you.

Angina

What is angina?

Angina (also known as angina pectoris) is the name given to pain in the chest that comes from the heart when it is short of oxygen. The heart is a large muscle that pumps blood about every second, and if it cannot get enough oxygen from its own blood supply (the coronary arteries) it will develop a 'cramping' pain rather like a cramp in the calf of the leg. The main cause of angina is a narrowing of the coronary arteries by a fat-like deposit called atheroma. It is a common problem and affects over half a million Australians.



Cross-section of a coronary artery

What are the symptoms?

Angina is typically a dull, heavy discomfort or pain in the centre of the chest. It has been described as 'pressure', 'tightness', 'heaviness' and 'like indigestion'. The pain can spread to the neck (throat), the jaw, the back or the arms (usually the left arm).

Additional symptoms may include shortness of breath, sweating, nausea and tiredness.

What brings on angina?

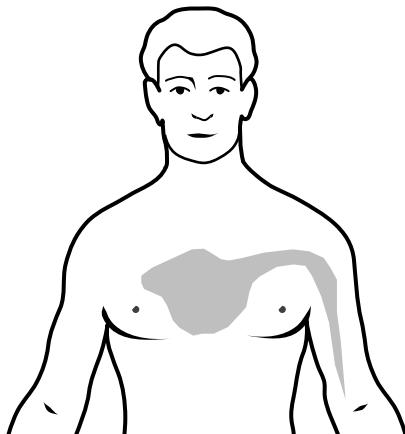
Angina characteristically appears during physical activity and fades away when the exertion stops. It can also be brought on by highly emotional situations (e.g. anger, fright, excitement), cold weather or after a heavy meal. People who smoke heavily or are overweight are more likely to suffer from angina.

What are the risk factors for angina?

Smoking, high blood pressure, a high blood cholesterol level, obesity and diabetes increase the risk of getting angina. There is also a tendency for it to run in families.

Is angina dangerous?

Angina is a symptom that serves as a warning that the muscle of the heart is not getting enough blood and there is a risk of a serious heart attack. Angina does not usually cause any damage to the heart.



The most common site of the pain of angina

What tests can be done?

Sometimes it is difficult to be sure that chest pain is true angina, and so special blood tests or an ECG (electrocardiogram) may help the diagnosis. The ECG can be performed while you are lying down (the resting ECG) or when stressed, such as cycling on a stationary bike (the stress ECG). If surgery is being considered, the state of the coronary arteries can be determined by special X-rays. You will also be tested for high blood cholesterol.

What is the treatment?

Self-help

- If you smoke, stop.
- If you are overweight, go on a sensible diet.
- If you are inactive, take on an activity such as walking for 20 minutes a day.
- If you are tense and stressed, cultivate a more relaxed attitude to life.

Medical help

There are many tablets that can help. Glyceryl trinitrate tablets (e.g. Anginine), which dissolve under the tongue, or glyceryl trinitrate spray under the tongue, relieve the pain. It is usual to take half an aspirin tablet each day. Your doctor will advise you about these tablets and other medication.

What are the warning signs of angina?

People usually cope well with their angina by using a disciplined approach to life. However, there are some warning signs that mean that the problem is worse than usual and your doctor should be notified:

- angina that lasts longer than 10 minutes
- angina pain that is more severe than normal
- glyceryl trinitrate tablets or spray (up to 3) not easing the pain
- angina becoming more frequent for no apparent reason
- pain coming on at rest for the first time
- new symptoms, such as sweating and breathlessness.

Anticoagulation therapy

Why is blood clotting important, yet dangerous?

Coagulation (the forming of clots) is a very important function of the body, especially when we get a cut and need to stop bleeding. However, clots forming inside blood vessels are dangerous because they can travel to the brain and cause a stroke or to the heart and cause a coronary attack.

Who is at risk of getting clots?

- People whose blood tends to clot easily—may be hereditary (e.g. factor V Leiden)
- People with hardening of the arteries
- People with heart problems such as a leaking valve or atrial fibrillation
- Those who have just undergone surgery and are lying idle in bed, who are liable to develop clots (thrombosis) in the deep veins of the leg, which can travel to the heart
- Those recovering from a heart attack (coronary)

What is anticoagulation?

This is the process of preventing clots in the blood by giving substances that tend to 'thin' the blood by neutralising one of the clotting mechanisms. These substances are called anticoagulants. Important types are heparin (given by injection) and warfarin (given orally).

Modern anticoagulants taken by mouth are being introduced and evaluated. If successful, they will remove the need for continual blood testing.

How is anticoagulation regulated?

Thinning of the blood has to be carefully and safely done; otherwise, uncontrolled bleeding (*haemorrhaging*) could develop. The level of thinness is controlled by blood tests. The amount of medication is worked out from these blood tests. Different people require different doses, and so the dose is tailored for each patient.

How should anticoagulants be taken?

The first dose of warfarin is worked out and usually is 10 mg for the first day. The dosage each day is worked out according to a formula that relies on blood testing called the international normalised ratio (INR). The tablets should be taken every day at around the same time. Your doctor or laboratory will advise you about the dose.

What about missed tablets?

It is important not to miss taking your tablets, and you should develop a system of taking them at around the same time each day. If you miss a dose, do not take a double dose, but take your next dose when it is due and contact your doctor.

What should you remember about the INR blood test?

1. Make sure it is done when ordered by your doctor.
2. Call your doctor or laboratory within 24 hours of the test just in case the dose needs adjusting.
3. Record the INR results in the record card provided.

What factors can affect warfarin?

- Your diet: It needs to be healthy and balanced.
- Alcohol: Use it in moderation and avoid binge drinking.
- Other medications: Check with your doctor.
- Complementary medicines: Check with your pharmacist, doctor or therapist.

What common medicines require special care?

Check with your doctor regarding the oral contraceptive pill, painkillers such as aspirin, cough or cold preparations, antacids or laxatives, antibiotics and various vitamins.

What common medicines increase the effect of warfarin?

Allopurinol, alcohol, amiodarone, anabolic steroids, antibiotics (most), aspirin, cimetidine, clofibrate, gemfibrozil, metronidazole, miconazole, non-steroidal anti-inflammatories, proton-pump blockers (e.g. omeprazole), phenytoin, quinine or quinidine, ranitidine, salicylates, tamoxifen, thyroxine

What common medicines decrease the effect of warfarin?

Antacids, antihistamines, barbiturates, cholestyramine, diuretics, haloperidol, oestrogen, oral contraceptives, vitamin C

What signs of bleeding should you report?

Black motions, blood in the urine (red or pink), easy bruising, unusual nose or gum bleeds, unusually heavy periods, unexpected bleeding after minor injury

Remember

- Keep to a consistent diet.
- Do not take aspirin or liquid paraffin.
- Always mention that you take warfarin to a doctor or dentist treating you.
- Take tablets strictly as directed without fail and have your blood tests.
- Take the tablets at the same time each day.
- Do not take a double dose.
- Advise your doctor of any illness.
- Avoid pregnancy.

What is anxiety?

Anxiety is an uncomfortable inner feeling of fear or imminent disaster. Most of us experience some temporary degree of anxiety in our lives, sometimes with just cause and at other times without. It can be a common normal human reaction to stress, and being anxious over appropriate things may help to make us more responsible, caring people. Some people, however, are constantly anxious to the extent that it is abnormal and interferes with their lives. Severe cases of anxiety can lead to panic attacks or hyperventilation.

What are the symptoms?

The symptoms can vary enormously from feeling tense and tired to panic attacks. Symptoms include:

- tiredness or fatigue
- dry mouth, difficulty swallowing
- apprehension: 'something awful will happen'
- sleep disturbances and nightmares
- irritability
- muscle tension/headache
- rapid heart rate and breathing
- sweating
- trembling
- diarrhoea
- flare-up of an illness (e.g. dermatitis, asthma)
- sexual problems.

What are the risks?

Various physical illnesses—such as high blood pressure, coronary disease, asthma and perhaps cancer—can be related to persistent stress and anxiety. It may aggravate a drug problem such as smoking and drinking excessively. It can cause a breakdown in relationships and work performance. It can lead to the serious disorder of depression. Because an overactive thyroid can mimic an anxiety state, it is important not to overlook it.

What is the treatment?

Self-help

It is best to avoid drugs if possible and to look at factors in your lifestyle that cause you stress and anxiety and modify or remove them (if possible). Be on the lookout for solutions. Examples are changing jobs and keeping away from people or situations that upset you. Sometimes confronting people and talking things over will help.

Follow a healthy lifestyle based on good nutrition, exercise, recreational activity and moderation or abstinence from the harmful CATS—caffeine, alcohol, tobacco and social drugs.

Special advice

Be less of a perfectionist: do not be a slave to the clock; do not bottle things up; stop feeling guilty; approve of

yourself and others; express yourself and your anger. Resolve all personal conflicts. Make friends and be happy. Keep a positive outlook on life, and be moderate and less intense in your activities.

Seek a balance of activities, such as recreation, meditation, reading, rest, exercise and family/social activities.

Relaxation

Learn to relax your mind and body: seek out special relaxation programs such as yoga and meditation.

Make a commitment to yourself to spend some time every day practising relaxation. About 20 minutes twice a day is ideal, but you might want to start with only 10 minutes.

- Sit in a quiet place with your eyes closed, but remain alert and awake if you can. Focus your mind on the different muscle groups in your body, starting at the forehead and slowly going down to the toes. Relax the muscles as much as you can.
- Pay attention to your breathing: listen to the sound of your breath for the next few minutes. Breathe in and out slowly and deeply.
- Next, begin to repeat the word 'relax' silently in your mind at your own pace. When other thoughts distract, calmly return to the word 'relax'.
- Just 'let go': this is a quiet time for yourself, in which the stresses in body and mind are balanced or reduced.

Counselling

Your doctor will provide the names of or arrange counsellors to help you cope with your fear and stresses. This may include behaviour therapy, which will help you learn to confront these fears, or cognitive behavioural therapy, which will teach you how to identify, evaluate, control and modify your negative fearful thoughts and behaviours.

Medication

Doctors tend to recommend tranquillisers only as a last resort or to help you cope with a very stressful temporary period when your anxiety is severe and you cannot cope without extra help. Tranquillisers can be very effective if used sensibly and for short periods.

Recommended reading

- Richard Carlson, *Don't Sweat the Small Stuff*, Hyperion, New York, 1997.
- Richard Carlson & Wayne Dyer, *You Can be Happy No Matter What*, Amazon, New York, 1999.
- Dale Carnegie, *How to Stop Worrying and Start Living*, rev. edn, Cornstalk, Sydney, 1999.
- Ian Gawler, *Peace of Mind*, Hill of Content, Melbourne, 2000.
- Ainslie Meares, *LifeWithout Stress*, Penguin Books, Melbourne, 1991.
- Norman Vincent Peale, *The Power of Positive Living*, Vermilion, London, 1996.

Aphthous ulcers

What are aphthous ulcers?

Aphthous ulcers are very painful ulcers that arise in the lining of the mouth, usually in the gums between the lower lip and teeth. The small hole on the surface exposes the sensitive tissue beneath. These mouth ulcers are not herpes infections or cancerous.

What do they look like?

The ulcers are small (about 2 to 3 mm across), shallow and yellow or grey in colour. Each ulcer is surrounded by a bright red halo.

Who gets aphthous ulcers?

Any person can get the ulcers. However, they occur most often in adolescents and young adults and tend to occur more often in women, especially just before a period. Aphthous ulcers are very common and affect at least 1 person in 10.

What causes aphthous ulcers?

The cause is not precisely known. One theory is that a virus or bacterium is able to ulcerate the gum surface when the immune system is below par. Known associations for this are:

- emotional or physical stress
- being 'run down'
- premenstrual tension
- injury such as from rough dentures, dental work, hot food, brushing teeth or biting the mouth
- irritation from certain foods such as citrus fruits, salted nuts, acid foods and chocolate.

What are the symptoms?

The first thing you usually notice is eating something acidic (such as a grapefruit or spicy food) that makes the ulcer smart. Sometimes there is burning or tingling for several hours beforehand. The ulcers may be so painful for the first 3 days that they make eating or speaking most uncomfortable.

What is the usual outcome?

Aphthous ulcers are not a serious problem. Most ulcers heal without scarring within 10 to 14 days. Recurrent attacks of ulcers are quite common in some people. Any ulcer that lasts beyond 3 weeks is unusual. If the doctor is concerned about an ulcer, a blood test or biopsy may be taken.

What is the treatment?

In most cases the ulcer will heal without any treatment and only feel uncomfortable for 3 to 4 days. If the ulcer has a known cause, such as a jagged tooth or rough denture, your dentist should be consulted. Some patients simply 'grin and bear it' and wait for healing to occur without applying any agents to the ulcer; they may just take mild painkillers. Many choose to have treatment to relieve the discomfort.

Eating and drinking

- Avoid eating spicy or sharp-tasting acidic foods (e.g. grapefruit, vinegar).
- Avoid any foods that aggravate the ulcer.
- Drink plenty of fluids and eat soft foods such as yoghurt, ice-cream and custard.
- Reduce the pain by sipping liquids through straws.

Pain relief

Apply a topical anaesthetic such as lignocaine gel or paint (e.g. SM-33 adult paint formula or SM-33 gel for children every 3 hours). Apply this with a cotton bud. This helps eating if applied before meals.

Healing methods

There are several methods that can help healing. One simple method is to rinse the mouth regularly with a salt solution (1 teaspoon to 500 mL of warm water). Another method is to use 0.2% chlorhexidine solution as a mouthwash on a regular basis. One of the following can be tried during the painful period of the ulcer.

- **The teabag method.** Apply a wet, squeezed-out, black teabag directly to the ulcer 3 to 4 times daily. The tannic acid promotes healing.
- **Topical steroid paste.** Apply triamcinolone 0.1% (Kenalog in orabase) paste as soon as the ulcer appears, 3 to 4 times a day.
- **Topical steroid cream or ointment.** Apply hydrocortisone or betamethasone 0.5% twice a day.
- **Topical steroid spray.** The sprays used to treat asthma (such as beclomethasone) can be sprayed onto the ulcer 3 times a day.

Appendicitis

What is the appendix?

The appendix is a small, worm-shaped pouch 90 mm long, that hangs off the first part of the large bowel called the caecum. In our ancestors it was quite large and helped digest cellulose. However, in modern humans it has no particular use but it can become diseased.

What is appendicitis?

Appendicitis is inflammation of the appendix. If it comes on suddenly and is very painful it is called 'acute appendicitis'. If it develops slowly and simply hangs around it is referred to as chronic or grumbling appendicitis.

What is the cause?

The inflammation is caused by an infection by bacteria that are normally present in the intestine and the appendix. It is believed to follow a blockage in the appendix such as from a lump of firm faeces. The infected appendix gradually swells and becomes filled with pus.

What are the symptoms and signs?

- Abdominal pain: this usually starts at the navel and then moves to the lower right side over the area above the appendix
- Sudden loss of appetite
- Nausea and vomiting (a couple of hours after the pain starts)
- Pallor: the patient usually looks pale
- Diarrhoea (sometimes) or may be constipated
- Fever (possible)
- Tenderness in the right lower abdomen, usually about a third of the distance from the navel to the top of the right hip bone
- Walking may be uncomfortable, causing a limp

Note: The classic symptoms may not occur in the very young or the elderly.

How common is the problem and who gets it?

- Each year about 1 person in 500 has an attack of appendicitis.
- It is the most common form of abdominal pain in young people requiring emergency surgery.
- It affects people of all ages but is rare in children under 2 years and in older people.
- It is most common between the ages of 15 and 25 with teenagers being the most commonly affected group.

How is appendicitis diagnosed?

The doctor usually makes a diagnosis based on the typical symptoms and signs, including pain on rectal examination. X-rays are usually not necessary but an ultrasound or CT scan may help to confirm the diagnosis. If there is any doubt, doctors may adopt a wait-and-see approach or look inside the abdomen with a laparoscope.

What are the risks?

The risks are minimal if it is diagnosed and treated early. If the diagnosis is confused with gastroenteritis because of diarrhoea and vomiting or delayed for some other reason, complications can include the following:

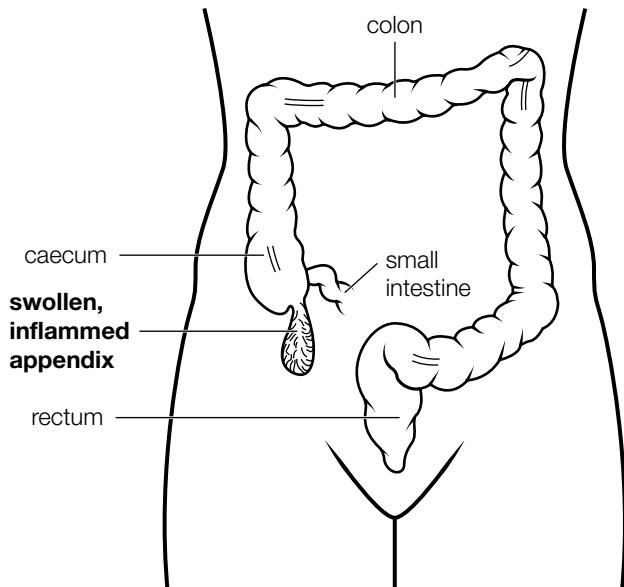
- perforation, when the hot, swollen appendix bursts, leading to peritonitis (inflammation of the lining of the abdomen)—this serious complication occurs in about 1 in every 5 cases
- an abscess, which is a localised collection of pus around the appendix.

What is the treatment?

Early treatment is best, before the swollen appendix bursts. The patient should be admitted to hospital. The cure for appendicitis is surgical removal of the appendix as soon as possible. The operation, which is called an appendicectomy, is usually straightforward with little risk of complications.

Antibiotics will usually be given for more severe cases with complications.

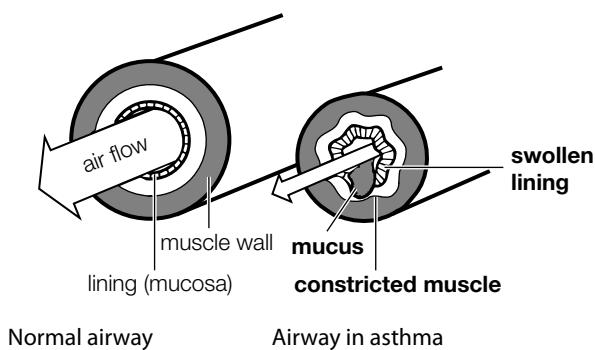
Note: Removal of the appendix does not affect general health.



Asthma

What is asthma?

Asthma is a common chest condition in which there is temporary narrowing of the breathing tubes in the lungs (airways) because they are hyperreactive (oversensitive). In asthma these tubes have inflammation and swelling of their linings, increased mucus inside, tightening of the muscles in their walls and therefore less flow of air in and out.



What causes an attack?

No single cause has been found, but a variety of factors may trigger an attack. A checklist of trigger factors is:

- infections, especially colds
- allergies (e.g. to dust, pollens, mould)
- exercise, especially in a cold atmosphere
- emotional upsets or stress
- house dust, especially the dust mites
- cigarette smoke; other smoke and fumes
- sudden changes in weather or temperature
- occupational irritants (e.g. wood dust, synthetic sprays, chemicals)
- drugs (e.g. aspirin; drugs to treat arthritis, heart problems and glaucoma)
- certain foods and food additives.

What are the symptoms?

The main symptoms are breathlessness, tightness in the chest, wheezing and coughing (especially at night).

Severe asthma

Symptoms or signs of very severe asthma are anxiety, blue colour of the lips (*cyanosis*), ashen grey colour of the skin, fast pulse, rapid breathing, indrawing of the chest wall, difficulty speaking, no response to asthma medication and feeling very sick. These uncommon severe symptoms mean that you should seek urgent medical attention—they are ‘call the ambulance’ signs.

How common is asthma?

About 1 child in 4 or 5 has asthma, usually in a mild form. It usually comes on between the ages of 2 and 7. Many children appear to grow out of it by puberty, but a small number have it again as adults. Others continue with it. About 1 in 10 adults has asthma.

What are the risks?

Severe mismanaged asthma can retard the growth of children, but the biggest worry (although uncommon) is the number of preventable deaths (including sudden deaths), especially in those who do not realise how severe the attack really is. With correct treatment, most people with asthma should be able to lead normal lives.

What is the treatment?

Prevention of attacks is the best treatment, and all people with asthma and their families need to know how to manage their asthma well. Medication is based on:

- relievers—quick acting, open the airways during an attack
- preventers—slow acting, prevent an attack.

Know your asthma

- Read all about it and be informed.
- Try to identify trigger factors and avoid them.
- Become expert at using your medicine and inhalers. A big problem is incorrect inhaler technique (up to 80% of patients).
- Know and recognise the danger signs and act promptly.
- Have regular checks with your doctor.
- Have physiotherapy: learn breathing exercises.
- Work out a clear management plan and an action plan with your doctor for when trouble strikes.
- Learn the value of your lung function with spirometry.
- Always carry your reliever inhaler and know how many doses are left.

Maintain good lung function

If you need medications, these should be as simple, safe and effective as possible. This is why inhaled medications are most often used for asthma. There are basically three types of inhaled medication:

- the ‘preventer’ (such as Pulmicort, Flixotide, Alvesco, QVAR, Tilade or Intal)
- the ‘reliever’ (such as Bricanyl, Oxis, Ventolin or Atrovent), which is called a bronchodilator
- combined preventer and reliever (such as Seretide or Symbicort).

Tablets may be prescribed to supplement inhalers. These include steroids and the leukotriene antagonists, Accolate and Singulair.

Key points

- Get to know how severe your asthma is.
- Avoid trigger factors such as tobacco smoke.
- Keep at your best with suitable medicines.
- Get urgent help when danger signs appear.
- Have a written action plan for asthma.
- Use your inhalers correctly and use a spacer if necessary (check your method with your doctor or asthma educator).
- A peak flow meter may help you assess severity.
- Have regular reviews with your doctor when well.
- Adults should have influenza immunisation yearly.

Asthma: correct use of your aerosol inhaler

Why all the fuss about inhalers?

It is very important to use your inhaler correctly so that the medication in the spray reaches deep into your lungs to treat your asthma. A faulty inhaler technique is a common cause for medication not working properly. It is important to know that it is your inhalation technique—not the pressure from the aerosol pushing in—that gets the medication into your lungs. Why not ask your doctor, asthma educator or pharmacist to check your use of your inhaler?

Did you know

90% of the medication from metered dose inhalers (also known as puffers) sticks to your mouth and does not reach your lungs?

What are the two main techniques?

The open-mouth technique and the closed-mouth technique are the main techniques, but the closed-mouth technique is the preferred one.

Most children from age 7 can learn to use puffers quite well.

The closed-mouth technique

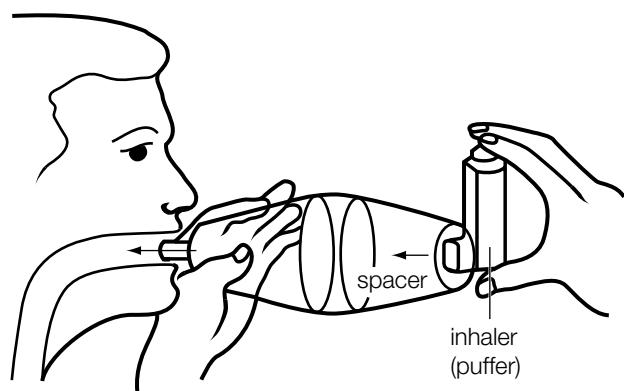
1. Remove the cap. Shake the puffer vigorously for 1 to 2 seconds. Hold it upright (canister on top) to use it (as shown).
2. Place the mouthpiece between your teeth but do not bite it and close your lips around it.
3. Breathe out slowly and gently to a comfortable level.
4. Tilt your head back slightly with your chin up.
5. Just as you then start to breathe in (slowly) through your mouth, press the puffer firmly, once. Breathe in as far as you can over 3 to 5 seconds. (Do not breathe in through your nose.)
6. Remove the puffer from your mouth and hold your breath for about 10 seconds; then breathe out gently.
7. Breathe normally for about 1 minute, and then repeat the inhalation if you need to.



The closed-mouth method

Common mistakes

- Holding the puffer upside down
- Holding the puffer too far away
- Pressing the puffer too early and not inhaling the spray deeply
- Pressing the puffer too late and not getting enough spray
- Doing it all too quickly: not breathing in slowly and holding your breath
- Squeezing the puffer more than once
- Not breathing in deeply
- Not holding your breath for 10 seconds



Using a spacer—a single puff at a time, then inhale

Large- and small-volume spacers

Many people who have trouble using inhalers can have a special 'spacer' fitted onto the mouthpiece of the inhaler. One puff of the aerosol is put in the spacer. Then you breathe in and out from its mouthpiece. Take 4 normal-sized breaths. This method is useful for adults having trouble with the puffer and for children of all ages. Spacers are very efficient and cause less irritation of the mouth and throat.

Extra points

1. The usual dose of a puffer (reliever) is 1 or 2 puffs every 3 to 4 hours for an attack.
2. If you do not get adequate relief from your normal dose, you should contact your doctor.
3. It is quite safe to increase the dose, such as to 6 to 12 puffs.
4. If you are using your inhaler very often, it usually means your other asthma medication is not effective or is not being used properly. Discuss this with your doctor.

Asthma: dangerous asthma

What are the symptoms and signs?

Failure to recognise the development of a severe asthma attack has cost the lives of many people. Most people cope with their asthma well, but doctors are concerned about the fact that some die when it could be prevented.

Asthma has to be treated with great care. The more you know about it, the better you can recognise danger.

Who is likely to be at high risk?

People who have experienced one or more of the following are more likely to have a severe attack:

- a previous severe asthma attack
- frequent visits to the emergency department
- hospital admission in the past 12 months
- using 3 or more medications to control symptoms
- reliance on reliever medications (e.g. more than 3 times a week)
- inadequate treatment and poor adherence
- denial of asthma
- aspirin- or food-triggered attacks.

Remember that severe attacks can start suddenly (even in mild asthmatics) and catch you by surprise.

Why is peak expiratory flow measurement important?

Although recognising deterioration of your symptoms is important, people who have moderate to severe asthma may also obtain a peak expiratory flow (PEF) meter and measure their PEF. It tells you how well your lungs are working. Most people over 8 years can test PEF accurately.

Warning signs of deterioration using PEF are:

- falling of your PEF and poor control
- readings less than 80% of your normal best
- readings less than 100 L/min
- more morning dipping than normal
- erratic readings
- less response to your bronchodilator than normal.

What are the early warning signs of severe asthma or an asthma attack?

- Symptoms persisting or getting worse despite adequate medication
- Increased coughing and chest tightness
- Poor response to 5 inhalations of relievers
- Benefit from reliever inhalations not lasting 2 hours
- Increasing medication requirements
- Sleep being disturbed by coughing, wheezing or breathlessness
- Chest tightness on waking in the morning
- Low peak expiratory flow readings

Contact your doctor if these problems are present.

What are the really dangerous signs?

Any of the following problems tell us that asthma is 'out of control':

- marked breathlessness, especially at rest
- waking at night with asthma
- asthma getting worse quickly rather than slowly, despite medication
- feeling frightened
- difficulty in speaking: unable to say more than a few words
- exhaustion
- drowsiness or 'not with it' feeling
- chest becoming 'silent' with a quiet wheeze, yet breathing still laboured
- blue or blue-grey colour
- chest wall drawing in
- a feeling that asthma is out of control
- respiratory rate greater than 25 (in adults) or 50 (in children).

First-line action plan

If any of these are present, immediately:

- Call an ambulance and say 'severe asthma attack' (best option).
or
- Call your doctor.
or
- If you are having trouble finding medical help, get someone to drive you to the nearest hospital.

It is important for you to have your own action plan.

Asthma first aid 4-step action plan

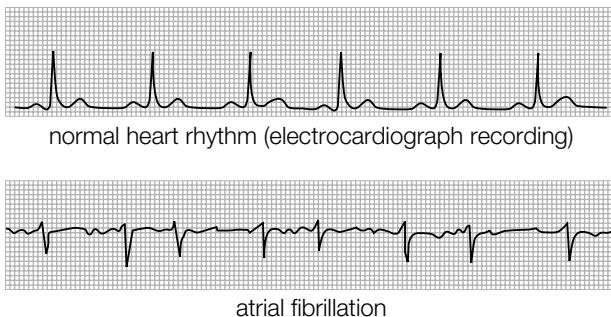
1. Sit upright and stay calm.
2. Take 4 separate puffs of your reliever puffer (one puff at a time) via a spacer device. Take 4 breaths from the spacer after each puff. (If you don't have a spacer, use the puffer on its own.)
3. Wait 4 minutes. Take another 4 puffs if there is no improvement.
4. If little or no improvement, CALL AN AMBULANCE IMMEDIATELY (dial 000) and state that you are having an asthma attack. Keep taking 4 puffs every 4 minutes until the ambulance arrives.

Get an action plan such as the National Asthma Campaign 'Asthma first aid 4 × 4 plan' from your doctor. Asthma action plans can be downloaded from the Asthma Foundation website at www.asthmafoundation.org.au.

Atrial fibrillation

What is atrial fibrillation?

Atrial fibrillation (AF) is a specific irregular rhythm of the heartbeat. Fibrillation means an uncoordinated quivering movement of muscle fibres. Heart function involves the contraction of two chambers: the smaller atrium, which connects to the larger ventricle. The heart's electrical conduction system runs from the atrium to the ventricle with the 'firing' beginning in the atrium. In atrial fibrillation the atrium beats too fast and the ventricle cannot keep pace and beats at a slower and more irregular rate than the atrium. The heart still pumps out blood, usually faster but not as efficiently as normal.



What are the symptoms?

Often there are no symptoms. The most common complaint is palpitations, which is an awareness of faster (racing) or more powerful heartbeats. AF is the most likely diagnosis if a person describes a rapid and irregular heartbeat. Other symptoms include weakness, chest pain (angina), shortness of breath, dizziness or faintness.

How common is atrial fibrillation?

It is very common especially with increasing age but it can occur at any age. It affects about 1 in 10 people over 70 years of age.

What are the causes and risk factors?

The main causes are:

- coronary artery disease with or without a previous heart attack
- overactive thyroid (thyrotoxicosis)
- hypertension
- rheumatic heart disease, especially mitral stenosis
- cardiomyopathy, including excess alcohol.

About 15% of cases are called lone fibrillators because no obvious cause can be found. Some are young people and these seem to have a good outlook. It is also seen in older people. It appears to be related to dysfunction of the autonomic nervous system and comes on after meals and exercise.

Risk factors for AF include:

- increasing age
- drugs including some prescribed drugs

- excessive alcohol including binge drinking
- smoking.

What are the risks?

The main danger is the risk of small blood clots forming in the atria from abnormal blood flow. The clots can travel through the circulation and block a smaller artery—this is called embolism. The main concern is an embolus to the brain causing a stroke. This risk is higher in older people.

A common complication is heart failure, which usually causes shortness of breath.

It is important to realise that AF can come and go, with periods of normal heart function between attacks.

What should be done?

It is important to consult your doctor if you suspect atrial fibrillation. It is diagnosed by taking an electrocardiogram (ECG) of the heart. It may be necessary to be connected to a special carry-around monitor for a couple of days to record your heart rhythm. Another common investigation is an echocardiogram especially to diagnose mitral valve disease or cardiomyopathy. Your doctor will usually refer you to a heart specialist (cardiologist) who is very skilled at managing this common condition.

What is the treatment?

The treatment is based on the cause, which may mean treating an overactive thyroid. Some patients may require no treatment but it is given especially if AF is causing symptoms and is of recent onset. It is important to control the heart rate as much as the rhythm. If a decision is made to stop AF, it is done by the process of cardioversion which can be performed either through special medication or by an electric direct current shock under a light anaesthetic. The issue of preventing blood clots especially to avoid strokes is always considered. It depends on the cause of AF and the age of the patient. If a blood-thinning agent is used, either warfarin or aspirin or another agent is chosen.

Preventive measures

- Avoid smoking.
- Drink alcohol in moderation.
- Follow an optimal, healthy diet.
- Exercise regularly.
- Avoid social or illicit mind-altering drugs.
- Avoid over-the-counter decongestants.
- Have your blood pressure checked regularly.

Seek medical help if you notice:

- a change in heart rate, rhythm or strength
- shortness of breath
- chest pain
- unusual symptoms such as unexplained weakness.

Basal cell carcinoma

What is basal cell carcinoma (BCC)?

BCC is the most common type of skin cancer. It develops in cells in the basal or lower layer of the surface of the skin. Changes in these cells result in a malignant tumour, which then becomes ulcerated. The ulcer usually grows very slowly over several years, destroying the tissue as it spreads.

It was called a rodent ulcer by our forebears because it looked as though rodents were eating away the skin.

However, it is rare to see large ulcers these days and fortunately, unlike other growths, it rarely spreads (metastasises) to other parts of the body.

What is the cause?

The cell changes are usually caused by damage as a result of long-term unprotected exposure to strong sunlight.

The risk increases with:

- age over 50 years
- exposure to excessive sunlight, especially sufficient to cause sunburn in children
- fair complexion
- lack of sun protection.

Who gets basal cell carcinomas (BCCs)?

They can affect anyone of both sexes but are more common in middle-aged and elderly people with light skin. BCCs are also common in people in their 30s and 40s. They are rare in people with dark skin because the extra melanin (dark pigment) in the surface skin cells protects the underlying basal cells from sunlight.

Where do BCCs usually occur?

BCCs can occur on any part of the body but the most common site is on the face, especially next to the eyes or nose. It is useful to think of it developing in an area covered by an eye mask.

Another common area is the neck, and the upper back and chest are becoming more common sites for BCCs these days.

What are the symptoms and signs?

A small flesh-coloured skin lump that does not heal within a few weeks or months is the first sign. It is usually symptomless, that is, it does not hurt, itch or burn and is not tender. It enlarges slowly.

It may have the following features:

- 'pearly', shiny-looking lump
- slow growing
- ulcerated—about 5 mm in the centre
- edges round or rolled
- small blood vessels on edges
- scars or crusts that come and go but the ulcer does not heal
- the ulcer may bleed.

What are the risks?

As a rule, BCCs pose few risks because they grow so slowly (over years) and do not usually spread to distant areas. They only cause problems if grossly neglected.

A large untreated ulcer can grow and ulcerate and destroy part of a nearby structure such as an eye or nose. Death from BCC is extremely rare.

What is the treatment?

Diagnosis of BCC is usually made after visual examination. It then should be removed. There are several ways to do this.

It may be excised, frozen by cryosurgery such as liquid nitrogen, chemically treated such as by Aldara cream, destroyed by radiotherapy or laser therapy, or curetted with a sharp, spoon-like instrument. All of these methods have a high success rate and leave only a slight scar.

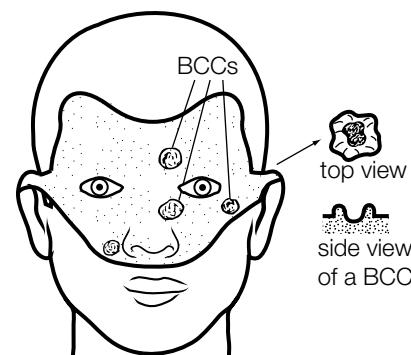
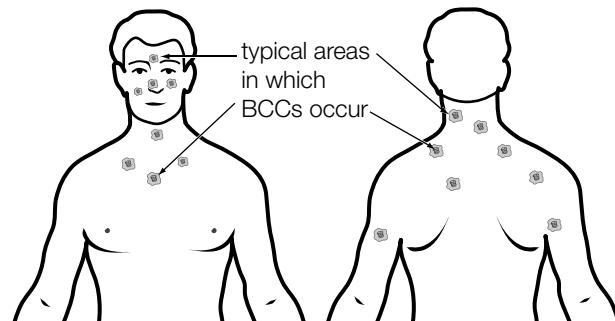
The best method is to cut it out because the tumour can then be examined under the microscope to make sure of the diagnosis and to ensure all of it has been removed.

Follow-up after removal

It is advisable to have regular check-ups because sometimes ulcers can recur in other areas of skin or in the old area from remaining basal cells. This usually occurs within 2 years or so. Many people have several BCCs removed in their lifetime. Your doctor may show you how to perform skin self-examination.

It is important to adopt preventive measures, such as wearing a broad-brimmed hat and sunglasses while in the sun, avoiding direct sunlight and using a factor 30+ or greater sunscreen on exposed skin.

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Bell's palsy

What is Bell's palsy?

Bell's palsy is a condition where the muscles on one side of the face become paralysed because of a problem in the seventh cranial nerve (called the facial nerve) that controls those muscles.

What are the symptoms?

The main symptom, which comes on quite suddenly (maybe overnight), is weakness of one side of the face. The corner of the mouth droops, the eye cannot close properly and actions of the face such as smiling and frowning look out of shape. Most cases are painless.

Other possible symptoms include:

- numbness in face
- ear pain
- face feels heavy
- difficulty eating
- food tastes slightly different
- sounds amplified
- impaired blinking
- drooling of saliva
- partial loss of taste.

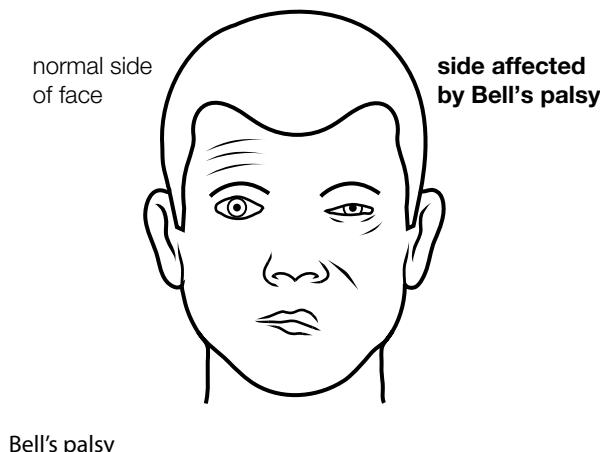
How common is Bell's palsy?

Each year about 1 person in 2000 gets Bell's palsy. About 1 in 70 people will have it in their lifetime. It can occur at any age, but is most common in young adults of either sex. It appears to be associated with diabetes and hypertension.

What is the cause of Bell's palsy?

We are not certain what causes this problem, although a viral infection causing inflammation of the facial nerve or the nearby ear may be a cause in some instances. An immune reaction may also be a factor. Other causes are possible and a brain scan may be ordered.

The facial nerve leaves the brain through a very small hole in the base of the skull near the ear. The nerve becomes swollen, and because of the tight fit in this hole it does not work properly.



One uncommon but very painful cause is herpes zoster (shingles) of the facial nerve, called Ramsay–Hunt syndrome. A rash appears in the ear canal.

What is the treatment?

The palsy usually recovers without special treatment. If you see the doctor as soon as it develops, a course of antiviral or steroid tablets may be prescribed. Although the use of steroids (cortisone) is controversial, there is some evidence that starting treatment early does help.

Care of the eye

If your eye cannot close fully, it is important to protect it from injury such as dust and grit by wearing goggles and putting a patch over the eye at night. Sticky tape can also be used to close the eye at night. The eye should not be allowed to dry, and artificial tears are usually prescribed. Report any unusual pain in your eye immediately.

Eating can cause the eye to water. This is called 'crocodile tears' syndrome.

Massage and exercises

Massaging and exercising the facial muscles may help recovery. Using oil or cream, massage the muscles of the forehead, cheek, eyes and lips. Exercise these muscles in front of a mirror by screwing up the eyes tightly to close them, smiling widely, baring the teeth and winking.

Heat treatment

If you have pain in the face, apply heat 3 times a day to the painful area. Wring out a face washer after soaking it in hot water and apply for 10 minutes. Make sure your eye is closed or covered.

General care

Continue your normal activities, but choose a good lifestyle by getting plenty of rest and sleep, avoiding smoking and excess alcohol.

Look after your teeth: brush and floss your teeth more often.

Keep a positive outlook on life. Remember that your somewhat embarrassing problem should soon settle.

What is the outcome?

Although scary, Bell's palsy is usually not a serious or permanent problem. Cases can vary from being mild and barely noticeable to being quite obvious. At least 80 to 90% of people make a good recovery. The slow and steady recovery takes about 6 to 12 months. Operations to help correct the problem are used occasionally for those uncommon cases where recovery is not complete. It is usually a one-off event but it can recur in about 1 out of 10 people.

When a loved one dies, the bereaved person invariably goes through a predictable human process of grieving.

The extent of the reaction will depend on circumstances such as the suddenness and unexpectedness of the death. It will depend also on the age of the deceased and the bereaved, and other factors such as personal, family, national or religious customs and habits. However, no matter what the circumstances, the bereaved will suffer a reaction and the emotions described here are regarded as normal responses.

The first stage

'Shock' or disbelief

The immediate reaction is for you to simply feel numb and empty. For a short time you may feel and behave almost as though nothing has happened—everything is a blur—but eventually extreme grief may take over. During this first stage, delusions of seeing or speaking with the dead person may occur: although this may disturb you, the experiences are normal. There is also a tendency to forget that the person is dead and act as though he or she were alive. You will find it difficult to concentrate and may give vent to spontaneous emotions such as crying, screaming or even laughing.

The second stage

Grief and despair

At this stage the loss of your loved one will really hit you. This sense of loss is reinforced by loneliness, by constant reminders of lost habits and experiences, and by the clothes and other personal effects left behind. You will feel intensely sad and lonely. Friends and acquaintances will not visit you so much now and, in fact, many will feel uncomfortable and embarrassed about approaching you. It is important that you understand this problem. You may actually feel like withdrawing from people.

The sense of presence of the deceased will continue. Two common feelings, anger and guilt, will also surface.

Anger

This may include anger towards those considered responsible for the death and even at the deceased for dying. Your resentfulness may include blaming and accusing the medical attendants of neglect. You will feel like talking a lot about your loved one, and you will probably recall all the vivid memories leading up to the death and constantly churn them over in your mind. Common recurring thoughts include:

- 'Why did it happen to me?'
- 'If only "so and so" had been done, it would be different.'

Guilt and self-blame

You may feel guilty because you did not do more for the person or take more notice of him or her. Such guilt feelings

and intense grief are more common when the death is unexpected. It is important that you do not feel too badly about any apparent neglect on your part—the 'if only I had' feeling.

The feeling of intense grief usually lasts about 6 weeks and the second stage of grief for about 6 months, but it can resurface every now and then over the next few years. During the last 4 months or so of this stage you will feel sad and helpless, then pass into a state of apathy and depression (the third stage).

The third stage

Adaptation or acceptance

After about 6 months you will begin to accept your severe loss. You develop a change in living habits by taking up new roles and activities. You can face up better to disposing of personal effects, establishing new relationships and attending to financial arrangements.

This phase takes a year or so and requires considerable understanding by all concerned. However, the feelings of apathy and depression can be a problem. Physical illness is common and includes problems such as insomnia, wheezing, diarrhoea and stomach pains. It is important to consult your doctor about any worrying physical or mental problems. Despite this, you will adapt and eventually learn to cope.

Self-help

First, you must realise that it is normal to pass through these stages of grieving, and so you cannot fight it. A bereaved person should always try to acknowledge his or her loss and not 'shut it out'. Talking about the deceased to relatives and friends and sorting out the person's possessions will help enormously in coming to terms with your loss, even though it may be painful at first. At the beginning it is good, if possible, to see the dead person, touch them if you want to, attend the funeral and give expression to your emotions.

If you have doubts about the exact cause of death, make sure that you discuss it with your doctor as soon as possible.

If you have prolonged intense grief feelings, make sure that you get professional help. Avoid visiting spiritualists: they seem to aggravate the problem.

You may find considerable support from others who have suffered a similar loss and from various self-help organisations. Most people find that it is helpful to have a break away from the home, especially staying with sympathetic friends or relatives in a different area or in another state.

The first anniversary of a death or the first Christmas spent alone can be a very difficult time, and so it is good to make arrangements to have company at that time.

What is bipolar disorder?

Bipolar disorder is a disorder of mental function in which the person's mood can swing between two ('bi') poles ranging from the elated hyperactivity of mania on the one hand to the flatness of depression on the other. It was previously called manic-depressive illness.

How common is it and who gets it?

About 1 in 100 people in the population suffers from bipolar disorder. It tends to run in families, and men and women are equally likely to develop it. The usual age of onset is in the late teens or 20s (especially). It has a tendency to develop in some women after childbirth or during the menopause.

What causes bipolar disorder?

The cause is believed to be a combination of factors including genetics, biochemistry and stress. Studies point to a genetic transmission, including the observation that children of parents with it have an increased risk. There is thought to be a chemical imbalance in the brain, which can be corrected with appropriate medication. Stress may be responsible for triggering the problem in some cases.

What is normal and abnormal?

A normal person has a fluctuation or swinging of moods varying from moderate liveliness to moderate lethargy, depending on circumstances from day to day or month to month. It is normal to feel flat sometimes and elated at others. However, people with bipolar disorder have extreme moods unrelated to external events. They are prone to exhibit behaviour which is uncharacteristic and not usually socially acceptable. They may have periods of normal human behaviour lasting for a short time or for many months sandwiched in-between the two extremes of mania and depression. The degree of bipolar disorder can range from mild to severe. Some people may only experience episodes of mania or hypomania, without sliding into depression. Most sufferers are able to lead relatively normal lives.

What are the symptoms?

The mania 'pole'

This phase is where the mood is mainly elevated, irritable and argumentative. Close relatives or associates are more likely to recognise the beginning of the manic phase than the sufferer, who may have no insight into their condition. It usually begins with a less severe degree of mania (called hypomania) which may stay at this stage or progress to the manic stage.

Stage 1: Hypomania

- Increasing activity and restlessness; 'high'
- Reduced sleep; early waking

- Leaping out of bed early and vigorously
- Talkative; fast speech
- Easily distracted
- Decreasing work performance
- Enthusiastically starts (rarely finishes) new projects
- Increased sexual drive and activity

Stage 2: Mania

- 'High as a kite'
- Reckless behaviour (e.g. spending sprees, running up debts, sexual promiscuity)
- Wild, garrulous speech
- Grandiose ideas and plans
- Impaired judgement/lack of insight
- Hasty decisions (e.g. job resignation, marriage)
- Paranoia
- Racing thoughts; flights of ideas

The person may be out of touch with reality, such as having delusions (false beliefs) or hallucinations. Behaviour may include singing, dancing or laughing for no reason.

The depression 'pole'

There are typical depressive symptoms but with a tendency to be more severe with bipolar disorder. The onset is gradual and sufferers become increasingly withdrawn and lose interest in things that they normally enjoy. There is a slowing down of many basic functions such as energy, appetite, sex drive, speech and movement. Sleep is affected. Problems multiply with pessimism, guilt feelings and reduced self-esteem and confidence. Some feel unable to face the world and that life is not worth living and may stay shut in their room.

Thoughts about death and suicide are common and indicate the need for urgent attention.

What should be done?

Since the illness is most easily treated in its early stages, it is best to see or speak to a doctor as soon as possible if you suspect that either you or an acquaintance is bipolar. Doctors often rely heavily on information from people other than the patient to make the diagnosis. Sufferers tend to lack insight, fail to realise their problem and tend to conceal it from their doctors. There are no available diagnostic laboratory tests.

What is the treatment of bipolar disorder?

The good news is that it responds well to modern medications, which aim to correct an apparent chemical imbalance in the nervous system. Examples of these 'mood stabilisers' are lithium, valproate and carbamazepine. Antidepressants are used for the depressive phase. The treatment should be carefully supervised so that relapses can be prevented. Supportive psychotherapy is also important. Patients with severe episodes, especially the first one, usually require hospitalisation. With appropriate treatment and support, most people with bipolar disorder can lead full and productive lives.

Bites and stings

Bites and stings from animals, spiders and insects in Australia are commonplace, but fatal bites are uncommon. In fact, only 1 in 20 bites from the funnel-web spider causes a serious problem. The following information is a summary of first-aid treatment for some bites and stings.

Snake bites

First aid

1. Keep the patient quite still.
2. Do not wash or cut the wound.
3. Immediately bandage the bite site very firmly, but not too tightly. A crepe bandage is ideal; it should extend for about 15 cm above the bite. (Do not use a tourniquet.)
4. Place the limb that has been bitten in a splint: use a firm stick or slab of wood.
5. Get the patient to the nearest doctor or major hospital without delay. If possible, take the dead snake too.

Tick bites

Ticks may lodge anywhere in the body of humans and their bite can be fatal, especially in children.

First aid

Do not attempt to pull the tick out by grasping the body. Take the patient to someone who is expert at removing them. If this is not possible, loop a strong thread around the tick's head close to the skin and pull it sharply sideways or grasp it behind the head with fine tweezers and gently pull it out with steady pressure.

Blue-ringed octopus stings

Children playing in small rock pools around sea shores are most likely to be stung.

First aid

Seek medical attention immediately. Mouth-to-mouth resuscitation may be necessary.

Spider bites

The Sydney funnel-web and the red-back spiders are the most dangerous. Unlike bites from snakes, spider bites are painful.

First aid

The first aid for the Sydney funnel-web is exactly the same as for snake bites. For red-back spider bites, apply an ice pack but do not bandage. Then seek medical help.

Bee stings

First aid

1. Scrape the sting off sideways with a fingernail or knife blade. Do not squeeze it with the fingertips.
2. Apply ice to the sting site to reduce swelling.
3. Rest and elevate the limb that has been stung.
An injection of adrenaline will be needed if the person develops shock.

Stinging fish and stingrays

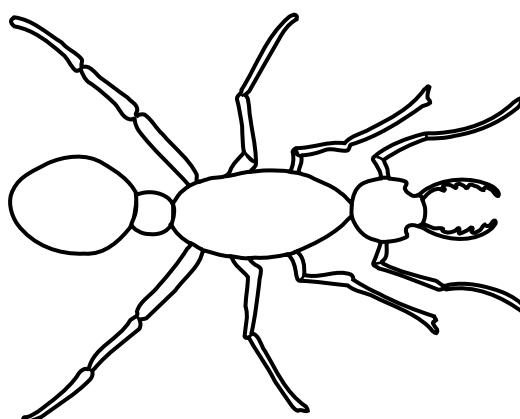
The sharp spines of these creatures have heat-sensitive venom that causes severe pain. Bathe or immerse the affected part in hot (not scalding) water for several minutes or place a hot cup against a localised sting.

Other bites and stings

These include bites from ants, wasps, bluebottles, scorpions and centipedes.

First aid

1. Wash the site with large quantities of cool water.
2. Apply vinegar or Stingose to the wound for about 30 seconds.
3. Apply ice for several minutes.
4. A soothing anti-itch cream can then be used.
5. Medicine is not usually necessary.
6. Seek medical aid if any unusual problems develop.



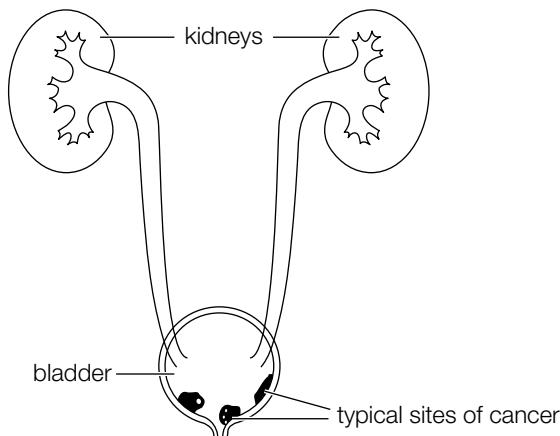
Jumper ant

Note

The box jellyfish (sea wasp) in tropical waters is very dangerous. Liberal amounts of vinegar should be applied as soon as possible. Immobilise the limb and bandage firmly.

What are the facts about bladder cancer?

Bladder cancer is the seventh most common cancer. It is rare in people under 50 years of age and most common in those over 70 years, especially in men. It most commonly presents with haematuria (blood in the urine) in over 80% of all patients. Most bladder cancers originate in the cells lining the bladder (transitional cells). Cigarette smoking is the most important factor linked to bladder cancer.



Urinary system showing bladder cancer sites

What are the symptoms?

- Blood in the urine—usually painless bleeding
- Symptoms of irritation of the bladder—frequency and urgency of urine, nocturia (night-time frequency)
- Dysuria—uncomfortable, possibly painful urination

What are the risk factors for bladder cancer?

- Cigarette smoking—4 times the risk of a non-smoker
- Increasing age
- Long-term occupational chemical exposure (e.g. aromatic amines, coal tar pitch, dyes). Possible association in the rubber, textile, aluminium and dye industries
- Repeated or chronic infections of the bladder
- Bladder schistosomiasis (a tropical infection)
- Pelvic radiotherapy and chemotherapy for other types of cancer
- Family history of bladder tumours
- Chlorinated water
- Perfumed powders and toiletries (including propylene glycol) applied to genital area (theoretical, not proven)

How is bladder cancer diagnosed?

The two key tests for diagnosis are:

- urine test—a urine sample (three separate sets) is sent to a laboratory to be examined under the microscope for cancer cells

- cystoscopy and biopsy—a flexible ‘telescope’ is passed into the bladder via the urethra and the bladder lining is inspected. A small sample of any abnormal tissue is removed for examination under the microscope.

Further diagnostic imaging (scans and X-rays) may be needed to determine whether the cancer has spread further into the urinary system.

How can it be prevented?

- Follow a healthy lifestyle.
- Ensure optimal nutrition, including a diet rich in vitamins.
- Drink copious filtered water.
- Balanced relaxation and leisure time.
- Cease smoking (if applicable).
- Reduce intake of coffee.

What is the treatment?

This needs to be considered in two categories—common superficial cancers with a better outlook and the more serious invasive cancers.

Superficial bladder cancers

Most cancers are superficial (confined to the surface cells); they are small mushroom-like growths that can be snipped off during cystoscopy and the area around it cauterised (burned). This may be curative or it may return, so follow-up urine cell tests and cystoscopies are required. For any recurrence, and for another type of superficial cancer called carcinoma *in situ*, an effective therapy is immunotherapy (also known as ‘biological therapy’). The most common type is Bacillus Calmette-Guerin (BCG) vaccine immunotherapy, which involves a series of weekly treatments (usually six) whereby the solution is introduced into the bladder via a catheter and the patient holds it in for 2 hours.

Other types of chemotherapy, such as mitomycin C, can be used in this way. Regular follow-up is also required. The outlook for superficial cancer is excellent with 75% having a 5-year survival at least.

Invasive bladder cancer

Treatment of more serious invasive cancer may include one or a combination of chemotherapy, radiotherapy and surgery, where part or all of the bladder may need to be removed. After a partial cystectomy the patient will be able to pass urine as usual but more frequently. If the whole bladder is removed (radical cystectomy), the ureters will be connected to a specially made opening in the abdominal wall (a urostomy). The urine will then flow into a bag (an ‘external bladder’) which must be emptied regularly.

Body odour

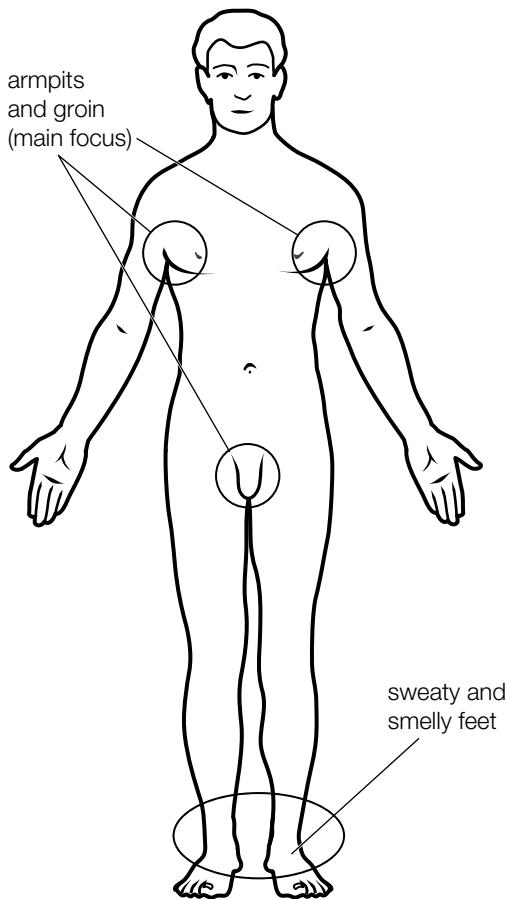
Body odour is an unpleasant smell that is a social embarrassment for many people.

What causes body odour?

It is usually caused by a combination of inadequate or incorrect attention to personal hygiene and excessive perspiration from the armpits and groin. The old saying 'Make sure you do an APC (armpits and crotch) wash' is sound advice. Certain types of bacteria that are present on our skin can cause a strong odour in some people who perspire heavily.

What medical conditions cause body odour?

Body odour can be caused by an infection in the vagina, by kidney failure or by taking certain social drugs such as marijuana.



Common sites of body odour

What is the treatment?

There are many ways to manage body odour and come up 'smelling like a rose'.

Scrub the body

Thoroughly scrub the body, especially the armpits and groin, with water and a deodorant soap. A good deodorant soap is pine soap. It is preferable to scrub morning and night under the shower, since the sweat glands and bacteria are active day and night. If the soap is not working, use an antibacterial surgical scrub (which your pharmacist can supply).

Choose suitable clothes

Choose natural fabrics such as cotton and wool that absorb perspiration better than synthetics. They also allow better evaporation of the sweat from the fabric.

Keep your clothes fresh

Regular washing of clothes is important. Using the same underwear for up to 7 days is a certain way to cause bad smells, so change each day, especially in the summer months. A daily change of your shirt or blouse is also advisable and regular laundering or dry-cleaning of stale coats, trousers and skirts is essential.

Use underarm antiperspirant deodorants

Ask your pharmacist for the most suitable antiperspirant deodorant. Do not use a deodorant only.

Watch your diet

It is important to watch what you eat, as some foods contribute to body odour. Avoid or reduce the intake of garlic, fish, curry, onions and asparagus. Reduce your intake of caffeine (coffee, tea and cola drinks), which stimulates sweat activity.

Care for smelly feet

If your feet are sweaty and smelly, make sure that you change your socks (should be cotton or woollen) regularly. Use shoe liners such as Odor Eaters or charcoal innersoles. Also use a special solution such as Driclor or Hidrosol or the preparation Neat Feat.

Shave hair under the arms

Shaving the hair from the armpits is certainly essential in women with a body odour problem.

Surgery

If you perspire heavily from the armpits, the sweat glands can be surgically removed by a simple procedure called axillary wedge resection. Ask your doctor to arrange this if necessary.

Desperate measures

If all else fails, you can try the 'old skunked dog trick' by taking a bath in dilute tomato juice. Pour 2 cups of tomato juice in your bath water and sit in it for 15 minutes before scrubbing with a deodorant soap. This is reported to be very effective.

Bowel cancer

What is bowel cancer?

Bowel cancer refers to an abnormal growth of tissue lining the large bowel including the colon and rectum. It is also called 'colorectal cancer'. Cancer is uncommon in the small bowel.

What are the facts?

Bowel cancer is the second most common cause of death from cancer in Australia. The incidence increases greatly after the age of 40 and mainly affects people over 50 years. Men and women are almost equally affected, with it being slightly more common in men. The cause is not known but one factor may well be a highly refined diet low in fibre. It is rare in native Africans living off the land who have a high-fibre diet.

What are the symptoms of bowel cancer?

In the early stages there are often no symptoms. Symptoms tend to appear when the cancer is more advanced and include:

- blood and/or mucus in the bowel motions
- bleeding from the rectum
- an unexpected change in bowel habit such as diarrhoea or constipation
- a feeling of incomplete emptying of the bowel
- pain and/or swelling in the lower abdomen
- constant tiredness
- loss of weight for no known reason.

Who is at risk?

The risk of developing bowel cancer is increased with:

- getting older
- having one or more close relatives (parent, brother, sister or child) who have had bowel cancer or polyps in the bowel
- having a past history of bowel cancer or polyps
- ulcerative colitis for more than 8 years.

There are two known genetic disorders that put people at a high risk:

- familial adenomatous polyposis
- hereditary nonpolyposis colorectal cancer.

People at relatively high risk should arrange to have a check-up with their doctor and family genetic services. At least two-thirds of bowel cancer can be cured if the disease is found and treated early.

What are the tests for bowel cancer?

- Digital rectal examination—the doctor checks the inside of the rectum with a gloved finger (digit) for a lump

- Colonoscopy and/or sigmoidoscopy—a biopsy of a lump may be taken
- Barium enema
- Special imaging such as a CT scan

What about screening?

The following are recommended:

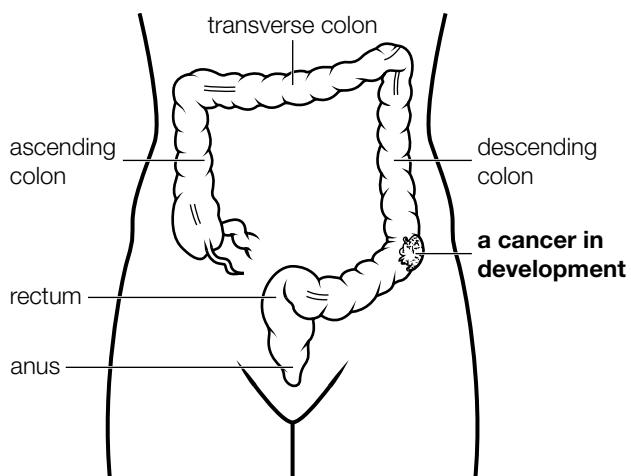
- occult blood testing of the faeces every 2 years
- colonoscopy:
 - every 5 years from age 50
 - for those at high risk every 1 to 2 years from age 25 or from 10 years younger than when a family member was diagnosed with bowel cancer and even younger (e.g. age 15 years) for those with a family history of polyposis.

How is bowel cancer treated?

The preferred treatment is to cut out the section of the bowel with the tumour by specialised surgery. The two normal ends are then joined. Sometimes an opening of the top end of the bowel is made into the abdominal wall (this is called a stoma). Stomas are usually temporary while the bowel heals but some people have them permanently. Radiation therapy or chemotherapy is nearly always used in addition to surgery.

What is the outlook?

The outlook is generally very good for people with large bowel cancer if it is discovered early enough to have surgery.



Bullying in the workplace

Occupational health professionals consistently claim that bullying at work is such an unfair and devastating problem that it outweighs all other work-related stress problems combined.

What is workplace bullying?

It is constant and unacceptable aggressive, abusive and insulting behaviour towards the worker with possible associated unfair loss of privileges or penalties. The bully exhibits an abuse of power causing the worker to feel intimidated, threatened, excluded and vulnerable, with aggravation of the cycle of stress and feelings of loss of self-esteem and confidence.

What is the extent of the problem?

It is estimated to affect 50% of the workforce at some stage of their working life and many do not know that they are being bullied. Bullying can be very subtle. It is a global phenomenon and a growing problem. Bullying was once thought to be confined to the schoolyard but it is a fact that people are pervasively bullied at work by their manager, coworkers, subordinates or clients. We do realise that bullying can also occur at home, in care (e.g. residential homes), in the armed forces, by neighbours, by landlords and by strangers.

What is the bullying culture?

We are now seeing a dangerous combination of economic rationalism, increasing competition, 'downsizing' and the current fashion for tough, dynamic, 'macho' management styles. Bullying can thrive in this culture, thus producing 'toxic' workplaces.

Who are the targets of bullies?

Bullies can pick on anyone and there is a tendency to think that they single out the quiet, passive, naive or 'different' person. This is not necessarily so, as evidence indicates that workers who have fine qualities such as competence (may generate envy), popularity, honesty and integrity, a sense of humour, low assertiveness and diligence may attract the attention of the bully.

What are the effects on the victims?

The symptoms and signs observed by doctors include:

- concentration problems
- headaches and migraines
- high levels of stress and anxiety
- sleep problems

- depression
- tearfulness and easily bursting into tears
- insecurity
- lack of interest and initiative
- poor self-esteem
- poor work performance.

People seem to be generally free of symptoms at the weekend if they are not suffering from depression.

What should be done about the problem?

Workers should not have to suffer this behaviour. It is your fundamental right to work in an environment without bullying or harassment. In the first place it is important to discuss your feelings with a trusted work colleague, close friend and/or family member.

People you should consider approaching for help include:

- your general practitioner
- your occupational health representative
- an occupational health physician
- a workplace nurse
- your union representative.

Responsible employers should set up organisational practices to prevent bullying in the workplace, including effective complaint and grievance procedures.

Who can you phone or e-mail?

- Government Department of Education, Employment and Workplace Relations
- Your Occupational Health and Safety representative



Burns and scalds

Burns can be caused by flame/fire, hot liquids, hot objects such as irons and heaters, ultraviolet radiation, electricity and certain chemicals. Scalds are burns from hot liquids, hot food or steam.

First aid rules for burns and scalds

- Ensure you and the burnt person are safe from further injury or danger.
- Cool a burnt or scalded area immediately for at least 20 minutes with cool (preferably running) water.

Safety first rules

Stop the burning process and remove any source of heat, if possible.

Flames:

- Smother flames with blanket (preferably a 'fire blanket', if available).
- Direct flames away from the head or douse with water.
- Roll person on ground if clothing still burning.
- Remove clothes over the burnt area if not stuck to skin.

Scalds

- Remove clothing that has been soaked in boiling water or hot fat.
- Remove carefully only if the skin is not blistered or stuck to clothing.
- Cool with cool or tepid water for at least 20 minutes.

Chemical burns

- Remove affected clothing.
- Wash or irrigate the burn for at least 30 minutes.
- Do not try to neutralise the chemical.

Electrical

- Disconnect the person from the electrical source.
- Use a wooden stick or chair to remove person if you cannot switch off the electricity. Don't approach if connected to high-voltage circuit.

Some useful rules

- It is best to cut clothing with sharp scissors especially from limbs.
- Remove possible constricting items (e.g. bracelets, watches, rings).
- Cover the burn with plastic cling wrap (not the first 6 cm of the roll). Apply this in strips and not wrapped around.
- A burnt hand can be placed in a plastic bag.
- Give basic analgesics for small burns (e.g. paracetamol).
- Cool running water is useful for 3 hours after a burn.
- Cool the burn; warm the patient.

Don't:

- prick blisters (leave this to medical attendants)
- apply creams, ointments, grease, lotions
- apply adhesive, sticky or fluffy cotton dressings
- put butter, oils, ice or ice water on burns in children.

Types of burns

There are three levels of burns:

- Superficial—affects only the top layer of skin. The skin will look red and is painful.
- Partial thickness—causes deeper damage. The burn site will look red and be very painful, and the skin will be blistered, peeling and swollen with oozing yellow fluid.
- Full thickness—damages all layers of the skin. The burn site will look white or charred black. There may be little or no pain.

Major burns

A major burn is injury to more than 20% of the total body surface for an adult and more than 10% for children. As a guiding rule, one arm is about 9%, one leg 18%, and the face is 7% in an adult or 16% in a toddler.

They are a medical emergency and require urgent treatment—call triple zero (000) or your local emergency number.

Guidelines for going straight to hospital

- For adults—full thickness burns over 10% of body surface
- For children—full thickness burns over 5%
- Burns including partial thickness burns to difficult and vital areas—hands, feet, face, joints, perineum and genitalia
- Circumferential burns—those that go right around a limb or the body
- Respiratory/inhalation burns (effects may be delayed for a few hours)
- Electrical burns
- Chemical burns.

Remember

Consider your own safety as you stop the burning process.

- If on fire: stop—drop—roll.
- If chemical: remove the stuff and flush with copious water.
- If electrical: turn off power.

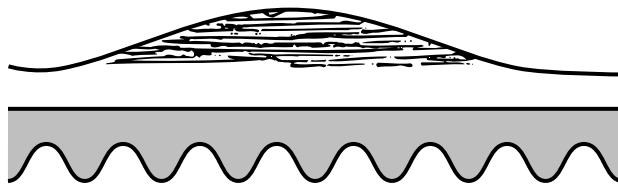
Calluses, corns and warts on feet

Tender skin lumps on the feet are usually caused by calluses, corns or warts. Calluses and corns are areas of skin that have thickened due to constant pressure, while warts are viral infections.

Calluses

What is a callus?

It is simply a thickening of skin caused by some form of repeated pressure and friction. It is usually not painful but can be uncomfortable. It is common on the sole of the foot over the base of the toes. A callus can be found on any part of the body, especially the hands or the knees. When a callus is pared, normal skin is found underneath.



Callus

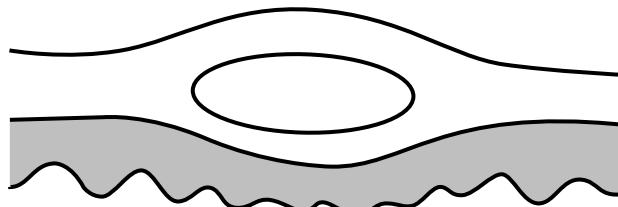
What is the treatment?

- No treatment is necessary if it is painless.
- Proper footwear is necessary to prevent calluses. Choose shoes that are wide enough and have cushioned pads over the balls of the feet.
- Paring with a scalpel blade by your doctor gives relief. (Avoid using razor blades.)
- Filing with callus files or a pumice stone wears away the callus. Soften it by soaking it in water before peeling the skin.

Corns

What is a corn?

A corn is a small tender raised lump that is round and has a hard centre. Corns usually form over the toes over the joints, between the toes and on the outside of the little toe. Sometimes they can be very painful. Paring reveals a white, circular mass of old skin.



Corn

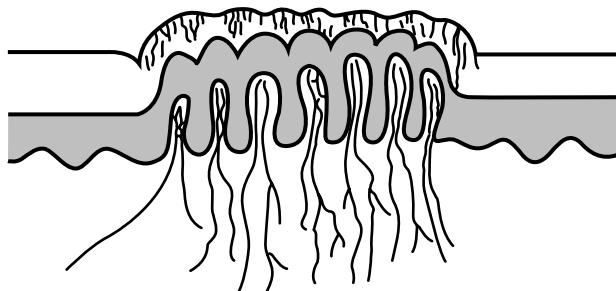
What is the treatment?

- The treatment is similar to that for a callus.
- A corn pad will reduce pressure.
- The corn can be softened with a chemical (salicylic acid) in commercial corn removers and then pared or peeled.
- Remove the source of friction if possible. Wear wide shoes—do not wear poor-fitting shoes. New shoes can be a cause, but your feet may adjust with stretching of the shoes.
- For soft corns between the toes (usually the last toe-web), keep the toe-webs separated with lamb's wool at all times and dust with a foot powder.

Plantar warts

What is a plantar wart?

A plantar wart is a wart that has grown on the sole of the foot and then gets pressed into it by pressure. It feels like a stone in the shoe and can be quite painful. It is caused by a viral infection and is more common in children and young people, who may pick the virus up from public showers. When it is pared, small bleeding points are exposed. Plantar warts are more difficult to treat than corns and calluses.



Plantar wart

What is the treatment?

Professional help is usually needed to treat these warts. Many methods can be used, such as freezing with liquid nitrogen, application of chemicals or surgical removal. One self-help method you can attempt is to apply salicylic acid (17%) with lactic acid (17%) solution (e.g. Dermatech Wart Treatment) once a day to the wart only, allow it to dry and then cover. Pare the treated wart with a pumice-stone brush or similar scraping tool regularly. Special cushions or pads should be worn inside the shoes to relieve pressure.

What is cancer?

Cancer is an abnormal disorganised growth of cells in the tissues of a person. The cells multiply out of control and drain vital nutrition from the normal cells. Cancer is often referred to as a growth. There are two types of growth: benign and malignant. The benign type is more organised and not generally dangerous, as opposed to malignant growth (cancer), which can spread from its original site to other areas of the body.

Is cancer a single disease?

No. Cancer is a group or class of diseases that share the main feature of uncontrolled cell growth. There are about 200 different types of cancer.

What causes cancer?

Although we are able to identify several triggering factors (such as smoking for lung cancer, ultraviolet radiation in sunlight for skin cancer, and nuclear radiation for blood and other cancers), we still do not understand the how and why of what causes some cells to become malignant.

Can cancer be inherited?

Yes: although most cancers are not inherited, some families carry inherited genetic mutations for certain cancers, notably breast and ovarian (which are linked), bowel, and others, on a lesser scale, such as prostate and melanoma.

How lethal is cancer?

Cancer is still a leading cause of death, accounting for about 1 in 8 deaths of people under 35 and 1 in every 4 deaths of those over 45.

What are the common sites of cancer?

- In men: skin, lungs, prostate, bowel, kidneys, testes, bladder, stomach, pancreas.
- In women: skin, breast, bowel, lungs, reproductive organs, kidneys, bladder, stomach, pancreas.
- The six most common causes of death from cancer in Australia are cancer of the bowel, lung, breast, prostate, lymphoma and pancreas.

What are the main warning signs (common symptoms)?

- Unusual bleeding or discharge
- A lump or thickening in the breast or elsewhere
- A sore that does not heal
- A change in bowel or bladder habits
- A persistent hoarseness or coughing
- Persistent indigestion or difficulty in swallowing
- Loss of weight
- A change in a wart or mole

Do these symptoms or signs always mean cancer?

No, not always, but it is dangerous to ignore them because the earlier the treatment (if cancer is the cause), the greater

the chance of recovery. Unusual bleeding should always be treated very seriously. If you have any of these listed symptoms or any trouble that persists longer than a month, see your doctor to be on the safe side. It may not be cancer but it should be treated!

Is pain an early sign of cancer?

No, not usually. Pain is usually a very late symptom of cancer, when it has grown into the nerves. However, pain should not be ignored.

Can cancer be cured?

Once cancer has spread, cures are very exceptional, but many cancers if detected and treated early (before the malignant cells have spread) can usually be completely cured. The cure rate for many cancers is steadily improving, particularly cancer of the cervix, testes, skin, large bowel, lymph glands (lymphoma) and blood (leukaemia).

What are the methods used to treat cancer?

There are many methods used to treat cancer, including surgery, chemotherapy (special drugs to destroy fast-growing cells), radiotherapy, laser therapy, cryotherapy and hormone therapy. The specialist will choose the most effective treatment for the particular cancer. Some patients find benefit from meditation, good nutrition and vitamin therapy in addition to specialised treatment.

How may cancer be prevented?

Some areas worth considering (based on studies of communities where cancer is rare) are:

- Do not smoke.
- Limit alcohol intake.
- Have a healthy diet including a variety of fruit, vegetables, wholegrains, pulses and fish.
- Keep to a lean, ideal weight.
- Avoid sugary drinks and processed meats. Limit consumption of salty foods and meats such as beef, pork and lamb.
- Avoid exposure to harmful sun. (Use a hat, long sleeves and 'block-out' lotion.)
- Be physically active for at least 30 minutes daily.
- Be relaxed—avoid stress and anxiety; practise meditation.
- Avoid exposure to radioactivity and asbestos.

Other than this, screening measures for early detection include:

- Pap tests every 2 years up to the age of 69
- regular mammography for women over 50
- regular breast or testicular self-examination
- bowel examination, including testing of faeces for blood for those at risk
- regular inspection of the skin.

Cannabis (marijuana)

What is cannabis?

Cannabis is a drug that comes from a plant called *Cannabis sativa* or the Indian hemp plant. It contains a chemical called tetrahydrocannabinol, which makes people get 'high'. It is commonly called marijuana, grass, pot, dope, hash or hashish. Other slang terms are Acapulco Gold, ganga, herb, J, jay, hay, joint, reefer, weed, locoweed, smoke, tea, stick, Mary Jane and Panama Red. Marijuana comes from the leaves, while hashish is the concentrated form of the resinous substances from the head of the female plant and can be very strong (it comes as a resin or oil).

Is cannabis a new drug?

No. It is a very old drug and was used as a herbal medicine by the Chinese about 5000 years ago.

What are the effects of taking cannabis?

This depends on how much is taken, how it is taken, how often, whether it is used with other drugs and also on the particular person. The effects vary from person to person.

Effects of a small-to-moderate amount

- Feeling of wellbeing and relaxation
- Decreased inhibitions
- Woozy, floating feeling
- Lethargy and sleepiness
- Talkativeness and tendency to laugh a lot
- Red nose, gritty eyes and dry mouth
- Unusual perception of sounds and colour
- Increased appetite
- Loss of concentration
- Looking 'spaced out' or drunk
- Difficulty remembering things
- Lack of coordination
- Delusions and hallucinations (more likely with larger doses)

The effects of smoking marijuana appear in up to 20 minutes and usually last 2 to 5 hours, followed by drowsiness.

With larger doses, feelings of confusion, restlessness, paranoia, excitement, anxiety or panic may develop (in addition to boosting the above effects).

What happens with dependence and long-term use?

Cannabis has a severe effect on personality and drive. People using it lose their energy, initiative and enterprise. They become bored, inert, apathetic and careless. A serious effect of smoking cannabis is the inability to concentrate and to learn and the loss of memory.

Other serious problems are:

- deterioration of academic or job performance
- adverse social and financial issues
- breakdown in family and friend relationships
- difficulty in stopping its use.

- respiratory disease, especially asthma, bronchitis and lung and mouth cancer (more potent than nicotine for lung disease)
- often a prelude to taking hard drugs
- becoming psychotic (resembling schizophrenia)
- impaired ability to drive a car and operate machinery.

Note: Cannabis has been proven to bring on a psychosis or make existing psychotic symptoms worse. Regular and heavy use can cause hallucinations that can last for a few days.

What are the withdrawal effects?

The withdrawal usually starts about 12 hours after stopping the use of cannabis. The effects are usually mild and are over within a few days in most people. It is more severe in habitual users. Some of the withdrawal symptoms are:

- irritability, anger and aggression
- nervousness (anxiety)
- feelings of depression
- sleep disturbances, including nightmares
- increased sweating, especially at night
- tremors
- muscle twitching
- restlessness
- nausea and other gastric disturbances
- memory and concentration difficulties.

Does cannabis improve one's sex life?

No—quite the opposite. Although one feels less inhibited, it tends to decrease libido. Long-term use suppresses sex hormones, decreases fertility and may result in impotence and loss of normal sex drive.

What about driving under the influence?

It is unsafe to drive after using cannabis.

Cannabis affects coordination and perception, and so it is dangerous to drive a car or ride a motorbike after using it. In an experiment, several people were given 'pot' to smoke and then asked to drive around a test circuit. Most made a mess of their driving, including crashing into posts and retaining walls. It is particularly dangerous when mixed with alcohol. Activities such as surfing and waterskiing are also dangerous.

What is the management?

The best treatment is prevention. People should either not use it or avoid using it to the degree that it may cause harm. If it is used, people should be prepared to 'sleep it off' and not drive.

Where to get help

- Your doctor
- Community health centre
- Australian Drug Foundation: <http://druginfo.adf.org.au>
- Drug and alcohol services in your state

Chronic fatigue syndrome

What is chronic fatigue syndrome (CFS)?

CFS is a feeling of chronic fatigue or extreme exhaustion that persists or keeps recurring for longer than 6 months and is associated with several other problems, including a reduction in physical activity by at least 50%. Organic disease or psychiatric causes are absent.

What are the symptoms of CFS?

Four or more of these symptoms can be present:

- extreme exhaustion (with little physical effort)
- headache or a vague 'fuzzy' feeling in the head
- aching in the muscles and legs, especially after exercise
- an emotional 'roller-coaster'
- poor concentration
- memory problems
- sleep problems, especially excessive sleeping
- feeling tired on waking
- feelings of depression
- feeling very flat and unwell after exertion
- aching in the joints
- sore throat
- palpitations
- feeling feverish (although temperature normal)
- swollen glands in neck
- various other symptoms (e.g. ringing in the ears)
- orthostatic hypotension (a sudden drop in blood pressure on standing up).

Does CFS have other names?

Yes; CFS is also known by several other names including myalgic encephalomyelitis (ME), postviral syndrome, yuppie flu, chronic Epstein–Barr viral syndrome, Icelandic disease, Royal Free disease, Tapanui disease and Raggedy Ann syndrome.

What is the cause?

So far the cause is unknown. We do know that about 2 out of 3 patients have a viral flu-like illness beforehand. No single virus has yet been identified. It is similar to the chronic fatigue that can follow glandular fever. In other patients CFS simply develops out of the blue and the body's immune system responds but in an abnormal way.

Who gets CFS?

The onset usually occurs between the ages of 20 and 40 years, but it can affect people of any age, social status and occupation.

What do the tests show?

All tests will be normal. (There is no single test for CFS available, but a special urine test is being developed.) The main reason that you have tests is to make sure that you do not have an organic cause such as anaemia.

What is the usual outcome and what are the risks?

CFS usually gets better with a slow, steady improvement, but relapses can occur on and off for some time and for some people for the rest of their life. There are usually no complications and the main concerns are feelings of anger, frustration and depression.

What is the treatment?

There is no magic drug treatment, so people need mainly support and care. It is important to be reassured that CFS is usually a self-limiting problem (i.e. it gets better naturally). In some cases it can clear up in 2 years but in others it can last for 10 or more years. The patient is the major carer of his or her body and must 'listen' to it and work out a day-to-day plan of what to do, in conjunction with the doctor. It is important not to get onto a merry-go-round of visiting many practitioners.

Self-help guidelines

Rest seems to be the best way to cope, although it does not cure it.

- Take painkillers such as aspirin for aches and pains.
- Pace yourself—don't overdo it, and rest when you can.
- Avoid things such as stress that aggravate the fatigue.
- Avoid long-distance travel if possible.
- Good supportive relationships are important.
- Attend a local support group.
- Undertake a realistic, regular, graduated exercise program.
- Join a meditation class and practise it at home.

Drug treatment

Drugs are generally not helpful, and using them is based on a 'wait-and-see' trial. Some people respond to certain drugs such as antidepressants, evening primrose oil or vitamin B12 injections, while others do not seem to get any benefit. Your doctor will guide you.

Where to get help

- Your general practitioner
- CFS/ME organisation in your state

Chronic obstructive pulmonary disease

What is chronic obstructive pulmonary disease (COPD)?

COPD is a slowly progressive disorder of the lungs in which the flow of air through the airways is obstructed. This obstruction may or may not be relieved to a certain extent by medications such as bronchodilators. Other terms used to describe it are chronic obstructive airways disease (COAD) and emphysema. However, emphysema is the extreme variation in which the healthy elastic sponge-like tissue at the end of the bronchial tubes is damaged and does not squeeze the air in and out properly.

What is the cause of COPD?

COPD is almost always caused by cigarette smoking, and patients with COPD have usually been smokers of 20 cigarettes per day for 20 years or more before the problem develops. The cigarette smoking leads to chronic bronchitis, which is a persisting inflammation of the bronchial tree (air passages) of the lungs. This repeated irritation may thicken and damage the delicate lining of these air passages, resulting in the secretion of excessive mucus and eventual narrowing of these tubes.

There are other irritating things that aggravate COPD, although not as severe as smoking. These include irritants from industrial fumes and dusts.

How do cigarettes affect the lungs?

When cigarette smoke is inhaled, 80 to 90% remains in the lungs and causes irritation, increased mucus production and damage to the deep parts of the lungs. Eventually mucus and tar clog up the air tubes, causing chronic bronchitis and COPD. If you continue to smoke, the problem will get worse. If you stop, the disease may stay steady and may even improve.

What are the symptoms?

COPD usually produces few symptoms in the early stages and they tend to be ignored.

The main symptom is a morning cough with sputum (phlegm) and shortness of breath with exertion which steadily gets worse. Smokers may consider the cough to be a normal smoker's cough, but there is nothing normal about it.

Other symptoms include wheezing, tiredness, weakness and difficulty clearing the chest.

What are the risks?

Patients are prone to chest infection, which continues the vicious cycle of lung disease. Such infections can lead to pneumonia.

As COPD gets worse, it can cause heart failure and respiratory failure (where the lungs get worse). Psychological complications include anxiety, panic and depression.

What is the treatment?

Self-help

- If you smoke you must stop.
- Avoid places with polluted air and other irritants such as smoke, paint fumes and fine dust.
- Go for walks in clean fresh air. (Keeping physically active is good for the lungs and heart.)
- Get adequate rest.
- Avoid contact with people who have colds and flu.

Note

The only treatment proven to slow down the relentless progression of COPD is to stop smoking.

Medical help

- Visit your doctor regularly for check-ups and if you get a chest infection.
- Oxygen may be needed if your problem is severe—home oxygen units are available.
- Visit your doctor without delay if you get a cold or bronchitis, or start coughing up sputum.
- If you have a chest infection, antibiotics will help clear it up.

Bronchodilators

- If your chest is tight or wheezy, inhalation of a bronchodilator should help.
- Many patients respond well enough to get sufficient short-term relief.
- Newer agents delivered by inhalation (e.g. tiotropium bromide) may give improved results.

Corticosteroids

Some patients may benefit from a course of inhaled or oral corticosteroids and doctors may undertake a trial of this therapy.

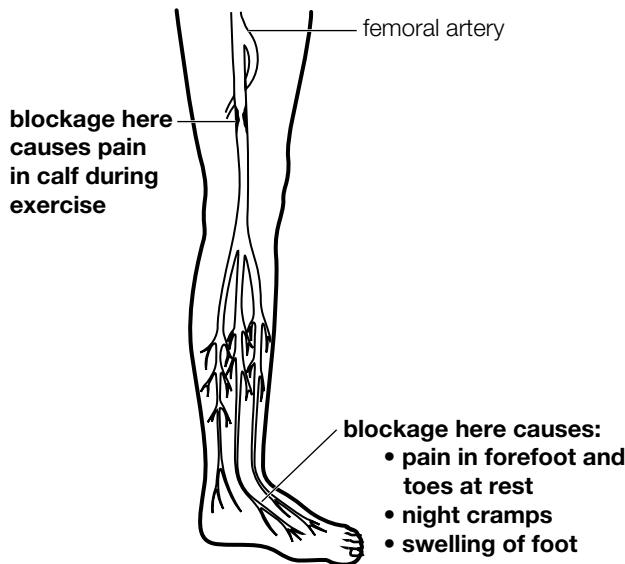
Prevention

- Influenza injection every year in autumn
- Pneumococcal vaccination every 5 years (to a maximum of 3 doses)
- If you still smoke, QUIT

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Circulation to legs: poor circulation

Poor circulation to the legs (known as peripheral vascular disease) is caused usually by atherosclerosis (hardening of the arteries). It is quite common in older people, and the likelihood of it occurring increases with age. It is known to be caused by smoking, high blood cholesterol, high blood pressure and diabetes.



What are the symptoms?

Pain in the calves and other muscles

The reduced blood flow to the legs can cause pain, usually in the calves but also in the buttocks and thighs. The pain is a cramping or ache felt only when the legs are active, such as when walking a long distance or running, and it disappears soon after rest. The cramping pain is caused by a lack of oxygen, which is carried to the muscles in the blood.

Pain in the foot

Some patients feel pain in the foot, especially the toes, forefoot and heels. Unlike pain in the muscles, it affects the skin and comes on at rest. It is generally worse in bed at night, is constant and hard to relieve.

Other symptoms

Other symptoms or signs include loss of normal hair on the legs, shiny skin, nail changes, coldness of the feet and discolouration of the foot (such as red, white or blue).

What aggravates the problem?

Certain drugs, such as beta-blockers (used to treat high blood pressure), smoking and anaemia aggravate this condition.

What are the risks?

The legs are subject to thrombosis, infections, wounds that do not heal (may develop into ulcers) and gangrene. People face the risk of amputation of parts or all of the leg.

What tests are done?

There are special investigations to measure the blood flow to your legs. If surgery is being considered, an X-ray of the arteries will be arranged.

How can you help yourself?

The most important thing to do is change your lifestyle so that the problem does not get worse. If you smoke, you must stop. If you are overweight, reduce your weight to ideal weight and have a healthy diet. A high blood cholesterol requires treatment. Regular moderate exercise is recommended. Try to keep your legs warm and dry. If you have rest pain in the feet, sleep with your legs dangling over the edge of the bed.

What are the special precautions?

Care of your feet is important, especially care of the toenails. When cutting toenails, avoid cutting the flesh; any wound is likely to get infected. It is advisable to have a podiatrist (chiropodist) care for your feet. Avoid injury to the legs and feet. Any simple wound is likely to break down and form an ulcer, which can take months to heal. Consult your doctor if you have any problems, especially an unusual change in the colour of your feet or a sudden onset of pain.

What is the treatment?

Your doctor will discuss the treatment options with you. Methods of relieving obstructed arteries include:

- angioplasty—clearing the arteries with balloons
- stenting—to clear local areas of obstruction
- bypass grafts using ‘new’ blood vessels.

What is cocaine?

Cocaine is a stimulant and local anaesthetic drug that is obtained from the shrub *Erythroxylum coca*, native to Bolivia and Peru and cultivated extensively in South America. It is used in medicine as a very effective local anaesthetic but has become a worldwide illicit drug with serious physical and social adverse effects. It has a stimulant effect similar to amphetamine but its effect is more intense and shorter lasting.

Cocaine chloride is prepared as a white crystalline powder but it can be processed to produce cocaine base, known as crack, which is in crystal form, or free base, which is a white powder.

What are the effects of cocaine?

The effect depends on how it is taken, the quantity taken and the person taking it. It produces a characteristic 'rush' of pleasure within minutes of taking it with feelings of wellbeing, alertness, confidence, increased sexual arousal, great physical strength and indifference to pain.

Other symptoms and signs may include:

- increased activity and talkativeness
- incoherent speech
- increased heart rate, breathing and body temperature
- enlarged pupils
- irritability
- paranoia, unpredictable violence and aggressive behaviour
- anxiety, agitation and panic
- dry mouth
- headache
- abdominal pain
- tremors and muscle twitches
- hallucinations
- reduced appetite.

What are the typical street (slang) names for cocaine?

Coke, snow, lady of the streets, lady, nose candy, snort, C, flake, rock, blow, vitamin C, crack, gold dust, toot, pepsi.

How is cocaine taken?

The multiple methods are intranasal ('snorting' or 'sniffing' powder), by mouth, smoking (vaporised inhalation) of crack cocaine and free base, and also by intravenous injection.

What happens with greater doses of cocaine?

The effects are more intense, with physical reactions such as twitching, tremor and jerking. Higher intake over a long period, which results from cravings for cocaine, can lead to 'cocaine psychosis' or 'madness'. Features are paranoid delusions, hallucinations (visual and auditory), and bizarre and possibly aggressive behaviour. Some people go on high dose binges over several hours or days, and this is followed by a 'crash' where there is intensive depression, lethargy and hunger.

What are the effects of an overdose?

The risk is high because the strength and mix of street cocaine is variable and unknown. An overdose can cause hallucinations; an increase in vital body functions such as heart rate, respiration and temperature; heart attack; brain attack (stroke) and seizures; all of which can lead to coma and death. Acute overdose is a medical emergency and best managed in hospital intensive care.

What are the long-term effects of cocaine?

These effects include:

- risk of cocaine dependence
- cocaine 'psychosis' or 'madness'
- eating disorders and weight loss
- sexual dysfunction
- hypertension and heart disease including irregular heart beat
- sleeping disorders especially insomnia
- formication—a sensation of insects crawling under the skin
- nose damage, leading to possible perforation of the septum from sniffing and snorting
- cerebral shrinkage with impaired thinking
- increased risk of hepatitis B and C, sexually transmitted infections and HIV (AIDS virus)
- impairment or destruction of personal and social life, including household, relationships, work, study and finances.

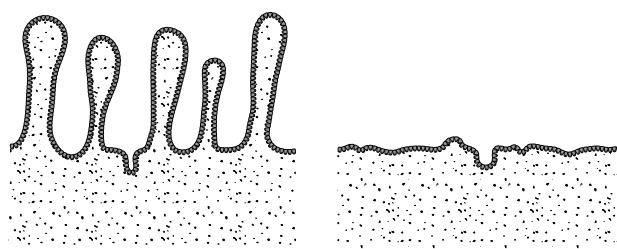
What can be done for the problematic user?

The best approach is admission to a drug rehabilitation program with appropriate social support.

Coeliac disease in adults

What is coeliac disease?

Coeliac disease is a hereditary disorder of the small intestine caused by a sensitivity to gluten in food. Normally the lining of the small intestine has a fluffy velvety texture but with coeliac disease it becomes smooth and flat. This reduces its ability to absorb nutrients including sugars, proteins, vital minerals and vitamins from food since the gluten damages the lining. The intestine simply cannot tolerate gluten in food. The exact reason is unknown. The condition is also called gluten enteropathy and non-tropical sprue.



Appearance of lining in normal intestine

Appearance in coeliac disease

What is gluten?

Gluten is a type of protein present in most grains, especially in wheat and rye and also in barley and oats. It is present in most of our breakfast cereals.

Who gets the disorder?

Coeliac disease is a relatively common condition that seems to affect mainly people of European descent, especially of Celtic origin. Children usually develop it between 9 and 18 months of age. However, the onset of the disorder can be delayed and it can occur at any age. The symptoms can come on slowly, perhaps over years, making early diagnosis difficult. It affects about 1 in 100 people.

What are the symptoms?

In some people there are few or no symptoms and when present they vary from one person to another. Many people with coeliac disease are not aware that they have the condition.

Common symptoms include:

- tiredness and lack of energy (may be anaemia)
- weakness
- weight loss
- diarrhoea
- constipation (in some people)
- bulky, offensive faeces
- faeces difficult to flush down toilet

- flatulence and abdominal bloating
- anorexia, nausea and vomiting
- stomach cramps.

What are the risks?

Generally it is not a serious disorder when diagnosed early but otherwise can have serious consequences. If not treated, malnutrition, osteoporosis, mental depression and infertility can occur. Both adults and children can get anaemia due to the poor absorption of nutrients, especially vitamins.

How is it diagnosed?

Special blood tests can give a strong clue to the diagnosis. However, the key test is a biopsy of the lining of the small intestine, which is done under sedation. This shows the flat lining of the intestine, which is essential to confirm the diagnosis.

What is the treatment?

There is no cure for coeliac disease but it can be controlled through the diet. The treatment is by a special diet which is needed for the person's lifetime. It excludes gluten—no wheat, barley, rye and oats. This allows the bowel lining to recover. In children the response can be dramatic. Avoid foods that are obvious (e.g. bread, flour and oatmeal), and those that are more subtle (e.g. dessert mixes, stock cubes, gravies, ice-creams, many processed foods and confectionery). Otherwise, have a diet high in complex carbohydrate and protein and low in fat. It is important to speak to a dietitian.

Forbidden foods

- Standard bread, pasta, crispbreads, flour
- Standard biscuits and cakes
- Breakfast cereals made with wheat or oats
- Battered or bread-crumbed fish, chicken, etc.
- Meat and fruit pies
- Most stock cubes and gravy mixes

A gluten-free diet is not necessarily dull. Supermarkets now sell many tasty products including special bread and biscuits made from gluten-free flour. These are labelled 'gluten free'. Breakfast cereals containing rice and maize (corn) can be eaten.

Any iron and vitamin deficiency should be corrected with tablets—ask your doctor.

Note: Ensure that you have follow-up visits to the dietician.

Other considerations

There is no restriction to general activities. It is useful to contact a coeliac disease support organisation such as the Coeliac Society in your state.

Constipation

What is constipation?

Constipation is:

- hard, often very small stools
- infrequent bowel movements or
- a feeling of unsatisfied emptying of the bowel.

Other possible symptoms:

- straining to pass stools
- having to sit on the toilet much longer than usual
- bloated, uncomfortable abdomen
- abdominal cramps.

What are the causes?

It is mainly caused by simple things such as:

- neglecting the habit of attending the toilet
- not responding to 'nature's call'
- change in routine (e.g. travelling)
- overuse of laxatives
- overuse of painkillers
- a poor diet with a lack of fibre
- lack of exercise
- insufficient fluid intake
- getting older.

Apart from slack habits, there are other important causes, such as bowel cancer, drugs, thyroid disease, depression, anorexia nervosa and lead poisoning. Any medicine that you are taking should also be suspected of causing constipation. Pain-killing opioids, especially codeine, are a major problem.

What are the risks?

Constipation can cause a lot of discomfort in the stomach and rectum and may cause blockage of the bowel. This can manifest as impaction of hard faeces with overflow incontinence of liquid faeces. It can lead to problems of the anus such as piles, fissures, rectal prolapse and itchiness, and to hernias.

Useful hints to avoid constipation

Activity

Adequate exercise, especially walking, is important.

Diet

Take plenty of fluids, especially water and fruit juices (at least 2 litres a day). Eat foods that provide bulk and roughage, for example, vegetables and salads, cereals (especially bran), fresh and dried fruits, and wholemeal bread. Some examples of food with good bulk (from least to most) are potatoes, bananas, cauliflower, peas, cabbage, lettuce, apples, carrots and bran. Fruit has good fibre, especially in the skin, and some have natural laxatives (e.g. prunes, figs, rhubarb, apricots).

Habit

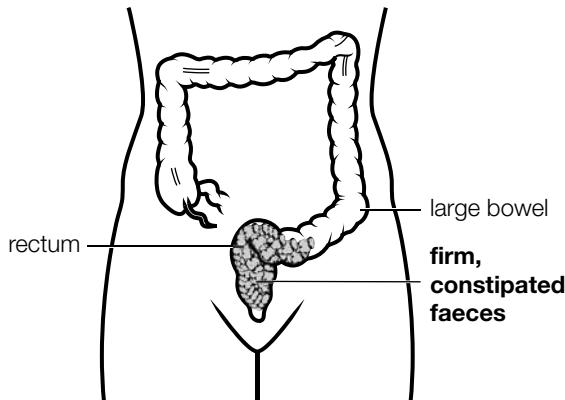
Answer nature's call to empty your bowels as soon as possible. Develop the after-breakfast habit. Allow time for a good relaxed breakfast and then sit on the toilet (up to 10 minutes if necessary) while reading! Eat meals slowly in a relaxed manner at regular times.

Laxatives

If laxatives are necessary, your doctor may recommend one of the hydrophilic bulk-forming agents, such as ispaghula and psyllium, or an osmotic laxative such as macrogol, lactulose or other appropriate therapeutic agent. Of these, macrogol (Movicol) is extremely effective for chronic constipation.

Important points

- If an obvious change occurs in your bowel habit, consult your doctor for advice.
- Bowel regularity can vary from person to person. Some people believe that just as the earth rotates on its axis once a day, so too should their bowels open daily to ensure good health. This may be ideal, but it can be normal to 'go' every second day or even twice a week.



What is contact dermatitis?

Contact dermatitis is a skin inflammation caused by an allergic or irritating reaction to certain substances coming into contact with the skin. The reaction can be acute (sudden), within minutes to hours, or chronic, which comes on slowly (such as the reaction to the nickel in a watch).

What are the symptoms?

- Redness of the skin
- Itchiness
- Bright red weeping areas or blisters (if severe)

The dermatitis can actually range from a faint redness to 'watermelon' swelling of the face.

The diagnosis for the offending agent is confirmed by patch testing.

What areas are usually affected?

- The face, especially around the eyes
- The genital area
- The hands and feet

What substances commonly cause dermatitis?

Irritants

- Acids and alkalis
- Detergents or soaps
- Sprays
- Solvents or oils

Allergens

- Plants (e.g. rhus, grevillea, primula, poison ivy, mango skin, parsnips)
- Chemicals in some perfumes and cosmetics
- Some metals in jewellery, especially nickel (e.g. nickel buttons or studs)
- Chromate (in cement and leather)
- Rubber and latex
- Some topical medications (e.g. antibiotics, anaesthetics, antihistamines)
- Resins and glue
- Dyes
- Coral

What is occupational dermatitis?

Occupational dermatitis is a very common form of contact dermatitis. It is caused by a whole range of irritants and

allergens used in industry that come into contact with the skin of workers. Most problems occur on the hands.

What is 'housewife's dermatitis'?

This is a common form of dermatitis on the hands of women (and men) who regularly use detergents, washing-up liquids and various household cleaners, especially with hot water. The skin becomes red, sore, dry and rough, especially over the knuckles. It may itch and crack, leading to extreme soreness.

What is the treatment?

The obvious thing to do is work out the cause and remove it or avoid it if possible.

Prevention

Always try to avoid the cause: an example is to get someone to remove any offending plants from the garden. Cut down the use of irritating substances such as solvents, soap, detergents, paint and thinners, scouring powder and pads, turpentine, and various polishes. A barrier cream can be rubbed into the hands before work.

For dermatitis of the hands, wear protective work gloves such as cotton-lined PVC gloves.

For housewife's dermatitis wear rubber gloves (if not sensitive to rubber) or other gloves for washing and peeling or squeezing fruit. Do not use any gloves that develop holes. Use soap substitutes such as Cetaphil wash or QV wash and pat dry the hands thoroughly after washing them. Use a dishwasher where possible if dishwashing is a problem.

Self-help

For hand problems, rub in a prescribed cream, ointment or lotion and a moisturiser such as Neutrogena, Norwegian Formula hand cream or Silic 15.

Medical help

Your doctor may prescribe a stronger anti-inflammatory cream or ointment such as hydrocortisone if the rash is severe or slow to heal. Sometimes anti-allergy tablets are prescribed. It is common to use patch testing, where suspected substances are applied to the skin to find the exact cause. If the patch test is positive, you should avoid the particular substance.

Coping with a crisis

The harsh reality

No matter how sound and healthy your normal state of mind and body, there is every chance that at some stage during your life you will face some sort of crisis. It may be brought on by a build-up of stress or it may be sudden and unexpected, such as becoming the victim of a crime or by suffering the sudden loss of something or someone precious to you.

Normal reactions

You will naturally feel terrible and react with disbelief and a whole range of emotions and physical feelings that are quite unfamiliar to you. These reactions include fear, helplessness, sadness, anger, shame, guilt, frustration and a terrible let down. The 'why me?' feeling is very real. The feelings usually last for only a few minutes at any one time. All this is a normal response to a crisis, and then you go through a recovery cycle.

Recovery

You may not think so at the moment, but you will soon learn to cope; nature heals in time. The human body has a remarkable ability to cope both physically and mentally with extreme stress. It is therefore important for your own sake and that of your loved ones who rely on you that you cope and keep on an even keel until time heals your misfortune. There is light at the end of the tunnel.

Rules to help you cope

1. Give expression to your emotions

You simply must accept your reactions as normal and not be afraid to cry or call out. Do not bottle up feelings.

2. Talk things over with your friends

Do not overburden them, but seek their advice and listen to them. Do not avoid talking about what has happened.



Talking with a friend can help you cope

3. Focus on things as they are now—at this moment

Do not brood on the past and your misfortune. Concentrate on the present and future in a positive way.

4. Consider your problems one at a time

Do not allow your mind to race wildly over a wide range of problems. You can cope with one problem at a time.

5. Act firmly and promptly to solve a problem

Once you have worked out a way to tackle a problem, go for it. Taking positive action is a step in allowing yourself to get on with life.

6. Occupy yourself and your mind as much as possible

Any social activity—sports, theatre, cards, discussion groups, club activity—is better than sitting around alone. Many people find benefit from a holiday visit to an understanding friend or relative. Religious people usually find their faith and prayer life a great source of strength at this time.

7. Do not nurse grudges or blame other people

This is not easy, but you must avoid getting hostile. In particular, do not get angry with yourself and your family, especially your spouse.

8. Set aside some time every day for physical relaxation

Make a point of doing something physical such as going for a walk, swimming or enjoying an easy exercise routine.

9. Stick to your daily routine as much as possible

At times of crisis a familiar pattern of regular meals and chores can bring a sense of order and security. Avoid taking your problems to bed and getting sleepless nights. Try to 'switch off' after 8 pm. Taking sleeping tablets for those few bad nights will help.

10. Consult your family doctor when you need help

Your doctor will clearly understand your problem, because stress and crisis problems are probably the most common he or she handles. Consult your doctor sooner rather than later.

- Remember that there are many community resources to help you cope (e.g. ministers, social workers, community nurses, crisis centres, church organisations).
- Take care: drive carefully to avoid accidents, which are more common during this time.

What is a cramp?

A cramp is a painful spasm in the muscle, usually the calf muscles of the leg. It can also occur in the small muscles of the foot. The affected muscle feels hard and tense, and it is almost impossible to control it. It comes on while resting, commonly in bed at night.

Who gets cramp?

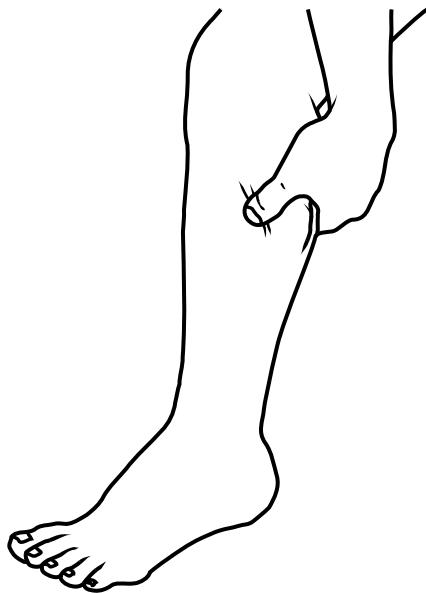
Cramp happens from time to time in almost everyone, with about 1 in 3 people over 60 and 1 in 2 over 80 suffering painful cramps. Some people are more prone than others to regular cramps. Pregnant women are prone to cramps. They are common in athletes and footballers, especially after long periods of intense running. They are also common after unaccustomed exercise. Many people, especially the elderly, are often roused during sleep by sudden and severe cramps in the calves.

What is the cause?

Probably the most common cause is unaccustomed exercise. It is thought that a type of natural acid substance builds up in the muscles and initiates the cramp. It can also be caused by a prolonged period of sitting, standing or lying in an uncomfortable position and by relative dehydration. Uncommon causes are more serious medical conditions such as hardening of the leg arteries, thyroid troubles, lack of salt (sodium chloride) in the cells and various drugs. Some drugs may cause cramp as a side effect; examples include diuretics (fluid tablets), statins, lithium and nifedipine.

What is the treatment?

The usual cramp lasts no longer than a few minutes, with some lasting up to 10 minutes, but most will usually clear up of their own accord. It can be eased by firmly massaging the affected muscle and flexing the foot back towards you.



Massage the affected muscle

It is easier if you can get someone to do this for you. Some people claim that they can quickly terminate their cramps by applying firm finger pressure in the webbing between the first and second toes.

How can night-time cramps be prevented?

Drink lots of water if you are prone to cramps.

Medication

Doctors often prescribe quinine sulfate tablets to take before retiring, but the value of quinine is uncertain and side effects can be serious. It may be worth trying a glass of tonic water or bitter lemon instead. A trial of magnesium tablets is also worthwhile.

Pillows at the foot of the bed

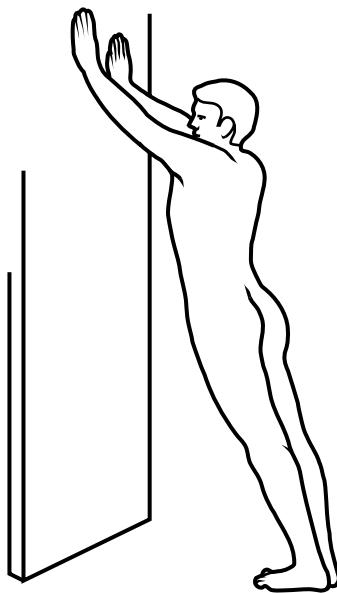
It is worth trying to keep the bedclothes off the feet and placing a doubled up pillow under the sheet at the foot of the bed so that the feet are kept bent back towards you during sleep. Some people find that raising the foot of the bed about 10 centimetres helps prevent cramps.

Exercises

Certain muscle stretching and relaxation exercises help prevent cramps.

Exercise 1: Stand barefoot about 1 metre from a wall, lean forward with the back straight and your outstretched hands against the wall (as in the diagram). Lift your heels off the floor and then force them into the floor to produce tension in the calf muscles. Hold this position with your feet flat on the floor for 20 seconds and repeat about 5 times. Do this exercise 2 to 3 times a day for a week and then each night before retiring.

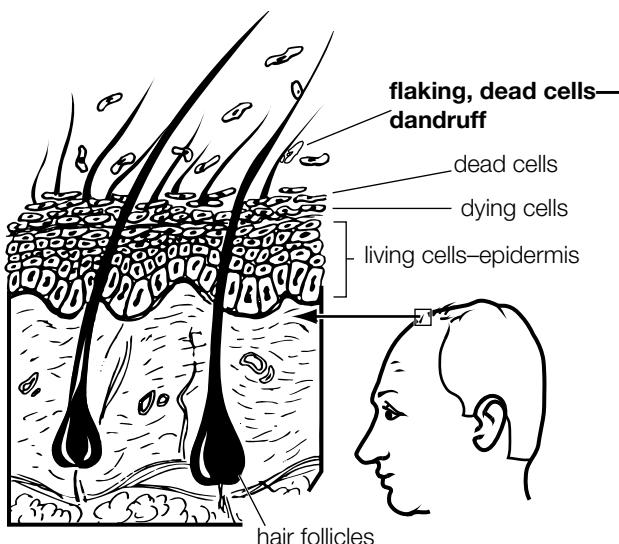
Exercise 2: This usually follows exercise 1 before retiring. Sit in a chair with your feet resting on another chair so that your legs are horizontal and you have support under your Achilles tendon. Keep this position for 10 minutes.



Dandruff

What is dandruff?

Dandruff is the excessive production of small flakes of dead skin on the scalp. It is a normal process, because the cells of the outer layer of scalp skin (the epidermis) die and are replaced constantly, like all other cells in the body. The dead cells then move to the outer edge of the skin and flake off after about 1 month. About 50% of the population have significant dandruff.



Skin of the scalp

What does it mean?

Dandruff is a common, normal condition and carries no risk to health whatsoever. Everyone has it to some degree, and some people notice it only when they wear a dark suit, dress or collar. There is an old saying that 'nothing stops dandruff like a blue serge suit'. It is not contagious and does not cause baldness. It can be associated with an itching scalp.

What aggravates dandruff?

Dandruff seems to be made worse by a variety of factors such as emotional stress, poor diet, poor hygiene (including rarely washing or shampooing the hair), allergies, and various chemicals and cosmetics applied to the scalp. The skin

inflammation called seborrhoeic dermatitis is considered to be a most important cause of dandruff.

Does hormone imbalance cause dandruff?

This is thought to be a factor, because it runs a similar course to acne. It is rare under the age of 12, is most common in adolescence and worse around the age of 20.

What about very severe dandruff?

In some people the dandruff is severe and persistent and itchy. Two causes of this are dermatitis of hair-bearing skin (seborrhoeic dermatitis) and psoriasis. There is usually evidence of these skin disorders on other parts of the body.

What is the treatment?

There are many medicated shampoos that are suitable for the treatment of dandruff, but no one particular shampoo suits everyone. The shampoo selected depends on the severity of the dandruff. The sulfide preparations upset some people because of staining of necklaces and after-odour, but they are effective. If you find a shampoo that suits you, stick with it.

Mild cases

Suitable shampoos are zinc pyrithione (e.g. Head & Shoulders, Dan-Gard), selenium sulfide (e.g. Selsun) and mixed preparations (e.g. Ionil).

The shampoo is massaged into the scalp, left for 5 minutes, then rinsed thoroughly. Use it 2 to 3 times a week.

A newer gentle product is piroctone olamine 0.5% (Sunsilk S/Poo Scalp Care).

Stubborn scaling and itching

This often is due to seborrhoeic dermatitis and psoriasis. Coal tar shampoos are effective for psoriasis. Examples are:

- Ionil T or Ionil T Plus shampoo, followed by Ionil rinse conditioner
 - Sebilar shampoo, followed by SebiRinse conditioner.
- Nizoral shampoo is ideal for seborrhoeic dermatitis. The best way to use it is to start with a milder shampoo, rinse off, then use Nizoral, leave it for 4 to 5 minutes and then rinse off. Use it twice a week.

If itching is a problem, a cortisone scalp lotion such as Diprosone or Betnovate scalp application can be used.

Deep vein thrombosis and travel

What is a deep vein thrombosis (DVT)?

A thrombosis is the formation of a blood clot that may block a blood vessel (vein or artery). Normally, veins carry blood from body tissues back to the heart; a system of valves in veins, and the pumping action of surrounding muscles, help move blood through the veins. In certain circumstances, blood flow does not function properly and a thrombosis may form. If it forms in a vein deep in the body it is called a deep vein thrombosis or DVT. This occurs most commonly in the deeper veins that are present in the thigh or calf muscles of the leg. However, DVT can occur anywhere else in the body, for example in the pelvis and lower abdomen.

What are the symptoms of DVT?

The area drained by the vein such as the calf may become swollen, painful and tender. If the thrombosis is not in the leg there may be no symptoms and a DVT is only diagnosed if a complication such as a pulmonary embolus occurs.

What is the risk?

A clot of blood that forms in the veins can dislodge and move through the circulation into the major vessels of the lungs. This is known as a pulmonary embolus, and it may cut off the blood supply of oxygen to the lung tissue. Sometimes (though rarely) it can cause sudden death. However, an embolus from a DVT cannot cause a heart attack or a stroke.) Another complication of a DVT is post-thrombotic syndrome of the leg, which can cause pain, swelling and ulcers in the leg.

Who is at risk?

DVT can occur in any person but some are at greater risk than others, especially if there is a family history of thrombosis, or the person has had a DVT before.

The risk factors include:

- Thrombophilia (blood disorders with a clotting tendency, either acquired through an illness or because of a genetic tendency to form clots such as factor V Leiden)
- increasing age
- smoking
- varicose veins
- obesity
- pregnancy and early post-pregnancy
- dehydration
- significant illness, especially heart failure, cancer
- recent major surgery
- oestrogen hormone therapy, including the pill
- being sedentary or immobilised for long periods (e.g. during long-haul flights).

What is the treatment?

After the diagnosis is made, usually by an ultrasound test, an attempt is made to prevent the clot getting larger and/or spreading up the vein by giving anticoagulants that thin the blood. It is usual to start with injections of heparin and add warfarin tablets. Newer anticoagulant agents that may be easier to take are becoming available. This treatment is very effective and it is rare to develop a serious embolus once the treatment is started.

It is usual to apply a compression bandage and start walking as soon as possible.

DVT and air travel

Long journeys (more than 4 hours) by plane (or train, bus, etc.) cause an increased risk of DVT. This is due to sitting cramped and still for long periods. Other factors seem to include reduced cabin pressure and dehydration from lack of drinking water and overuse of alcohol.

How is it prevented?

In some cases in people with a high risk of thrombosis, or a past history of thrombosis or thrombophilia, doctors may recommend injections of a heparin, a blood thinning substance.

Other strategies

Two main ways to prevent DVT are to exercise the body, especially the muscles of the legs, and prevent dehydration.

In-flight exercises

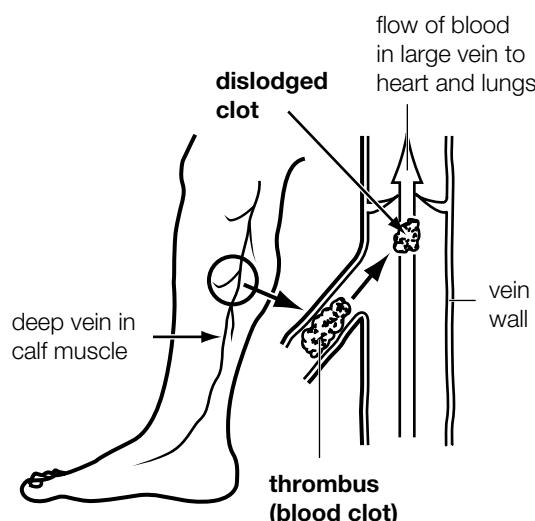
These are recommended for about 3 to 4 minutes every hour and include foot pumps, ankle circles and knee lifts (these are usually explained on the plane). The foot pumps are very good and are done by alternately pressing the heels and the balls of the feet on the floor. You continue this up-and-down movement for at least 30 seconds regularly. You should also get up regularly and walk around the aircraft cabin as space and time permit. Avoid taking sedatives or sleeping tablets.

Keeping hydrated

Drink plenty of water before, during and after travel. Reduce the amount of alcohol and caffeine or ideally avoid these fluids as they cause increased fluid loss through the kidneys.

Compression stockings

There is evidence that compression stockings worn up to the knees can help prevent travel related DVT. You can purchase them from a pharmacist, who can advise on the appropriate type and size.



Depression

What is depression?

Most people feel unhappy, sad or depressed every now and again, but there is a difference between this feeling and the mental illness of depression.

Depression is a very real illness that affects the entire mind and body. It seriously dampens everyday activities of humans: such as their energy for activity, sex drive, sleep, appetite and ability to cope with life. They cannot seem to lift themselves out of their misery or 'fight it themselves'. Superficial advice like 'snap out of it' is unhelpful, because the person has little or no control over it.

What is the cause?

The cause is somewhat mysterious, but it has been found that an important chemical is present in smaller amounts than usual in the nervous system. It is rather like a person low in iron becoming anaemic.

Depression can follow a severe loss, such as the death of a loved one, a marital separation or a financial loss. On the other hand it can develop for no apparent reason, although it may follow an illness such as glandular fever or influenza, an operation or childbirth. Depression can occur at any age but is seen more commonly in late adolescence, middle age (both men and women), retirement age and in the elderly.

How common is depression?

It is one of the most common illnesses in medicine and is often confused with other physical illnesses or fatigue.

About 1 in 4 women and 1 in 6 men suffer from depression at some stage of their life.

What are the symptoms?

The patient can experience many symptoms, both physical and mental. On the other hand, the classical symptoms of being depressed (crying and not sleeping) may be absent and the depression may be masked. Usually, however, some of the following are present:

- lowered mood with a feeling of not being able to cope with life (e.g. hopelessness, helplessness)
- continual fatigue, loss of energy nearly every day
- sleeping problems (e.g. early or late waking)
- eating problems (e.g. diminished or increased appetite)
- loss of interest in things such as sex
- inability to enjoy normally enjoyable things
- tension and anxiety
- irritability, anger or fearfulness
- feelings of guilt or worthlessness or being unwanted
- difficulty in concentrating and making decisions
- headache, constipation or indigestion
- recurrent thoughts of death and suicide.

If 5 or more of these symptoms are present, for most of the time over a 2 week period, this may indicate a diagnosis of depression.

The symptoms may vary during the day, but are usually worse on waking in the morning. If they are severe, the depressed person may not feel like living at all.

What are the risks?

Suicide is a real risk. Almost 70% of suicides are due to depression in an otherwise healthy person. Another very

serious and avoidable consequence is marital or relationship breakdown, mainly because depressed people can be unpleasant to live with, especially if their spouse or friends do not understand their suffering.

What must be done?

Depressed people really need urgent medical help, which usually gives excellent results. The risk of suicide is real, and threats must be taken seriously—they are often carried out. Every conceivable effort must be made to get medical help, even if the patient is reluctant to see a doctor.

What is the treatment?

The essentials of treatment are:

- support and counselling therapy (the best therapy)
- antidepressant medication, which replaces the missing chemicals.

Antidepressants are not drugs of addiction and are generally very effective, but take about 2 weeks before an improvement is noticed. If the person is very seriously depressed and there is a risk of suicide, admission to hospital will most likely be advised. Other more effective treatments can be used if needed. The depressed person needs a lot of understanding, support and therapy. Once treatment is started, the outlook is very good.

Special counselling, such as cognitive behaviour therapy (CBT), is very important. Simply talking about your feelings is most helpful.

Important points

- Depression is an illness that is different from normal sadness.
- It is more common than is realised.
- It just happens; no one is to blame.
- It affects the basic functions of energy, sex, appetite and sleep.
- It can be lethal if untreated.
- It can destroy relationships.
- Talk it over with people who are good listeners.
- It responds well to treatment.
- Never give up—better times are ahead.
- Help is available from:
 - beyondblue: 1300 224 636, www.beyondblue.org.au
 - SANE info line: 1800 187 263, www.sane.org
 - Lifeline: 131114
 - moodgym.anu.edu.au (provides online CBT)
 - Black Dog Institute: www.blackdoginstitute.org.au



Depression: medication for depression

What is the purpose of your medication?

Antidepressant medication is prescribed to correct the chemical changes in your nervous system that have caused, or contributed to, your depressive illness. It is known that in depression an important chemical is present in smaller amounts than usual. It is rather like a person low in iron becoming anaemic and being given iron until the system is restored to normal. Most people have a good response to the medication, especially when combined with counselling and psychotherapy (talking therapy).

What is the nature of the medication?

The pills are called antidepressants. They are not tranquillisers, pep pills, nerve pills or drugs of addiction. They are designed to lift you out of your depression—to lift your mood and energy and your ability to cope with life.

There are now a great variety of antidepressants and your doctor will select the most suitable one for you.

How soon will the medication work?

It usually takes 2 to 4 weeks before you notice an improvement. Sometimes it is sooner, sometimes longer, depending on the medicine and the individual person. Sometimes you may feel a little worse before you start to feel better, but try to persist. Because it is difficult to predict your chemistry, the pills may have to be juggled for the first few weeks or even changed if they do not suit.

What is the dosage?

The dose will be clearly explained in the directions on the packet. The lowest effective dose will be prescribed and the tablets will gradually be increased as required. It is common to start with a smaller dose and then build up the medication.

How long will the treatment last?

It is usual to take the tablets for about 6 to 12 months, and then they may be reduced slowly. Even if you feel much better after 3 weeks or so, it is important to keep taking the tablets to allow your chemical balance to steadily consolidate. Stopping the tablets too early may cause a relapse, and it may cause withdrawal symptoms if they are stopped too abruptly.

What side effects can you expect?

Side effects are quite common but they may be temporary and indicate that the treatment is working, so it is important to give them some time to work, unless the side effects are severe.

Side effects of the most commonly used drugs, such as selective serotonin reuptake inhibitors (SSRIs) and serotonin and noradrenalin reuptake inhibitors (SNRIs), include:

- nausea
- nervousness or agitation

- bowel disturbances (e.g. diarrhoea, constipation)
- insomnia, tiredness
- headache
- dizziness
- sexual problems, mainly with ejaculation, and change in libido
- weakness or lack of strength
- rash
- tremor
- dry mouth
- feeling 'unreal'.

Side effects of tricyclic antidepressants include:

- sleepiness or drowsiness: avoid driving or operating machinery if you feel drowsy
- dry mouth: this is common; you can chew sugarless gum, have sips of water, suck ice or have gargles
- increased appetite: weight gain is common; choose your food carefully (low fat, low sugar, high fibre)
- constipation or difficulty passing urine (in older men)
- difficulty reading fine print
- dizziness on standing or getting up quickly
- sexual problems, mainly with ejaculation, and change in libido

If you do experience some of these milder effects, it is usually a sign that the medication is working. You soon adapt to most of these side effects, which can settle after 2 to 3 weeks. Contact your doctor about any problems—this is very important. Tell your doctor if you are taking other medicines, including herbal remedies such as St John's wort, as these may interact with antidepressant medications.

What about alcohol?

Alcohol can interact with the tablets, making you more sleepy or more drunk. A small amount will not hurt you, but do not drink and drive. Alcohol acts as a depressant, so it is advisable to avoid it if you are depressed.

What about pregnancy?

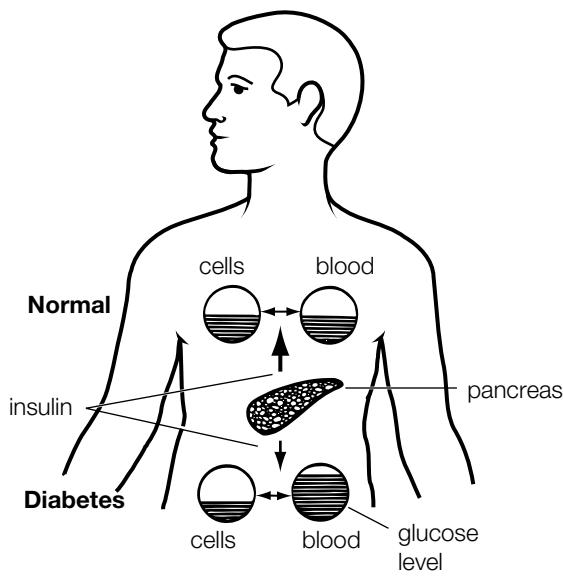
It is not advisable to take these tablets if you are planning to become pregnant, but ask your doctor.

Important points

- Take the tablets as instructed.
- Side effects tend to improve.
- Improvement takes about 2 to 4 weeks.
- Plan to take them for about 6 to 12 months.
- Avoid excessive alcohol; do not drink and drive.
- Keep the tablets away from children.
- Contact your doctor about any concerns.

What is diabetes?

Diabetes mellitus is a disorder in which there is too much sugar in the blood. It is caused by a relative lack of an important hormone called insulin, which is made by a gland behind the stomach called the pancreas. Diabetes comes from a Greek word meaning 'to pass or flow through' and mellitus means 'sweet'. Insulin controls the balance of sugar (glucose) in the body and allows your body's cells to use available glucose for energy. There are two types of diabetes. In type 1 diabetes, the body does not make enough insulin. In type 2 diabetes, the insulin the body makes doesn't work properly.



Glucose balance in the body

What are the two main types of diabetes?

Type 1 diabetes was previously known as juvenile-onset diabetes or insulin-dependent diabetes mellitus. It occurs mainly in young people, and because their pancreases produce very little insulin they require injections of insulin in order to survive. The cause is damage of the pancreas by the body's immune system.

Type 2 diabetes was previously known as maturity-onset diabetes or non-insulin-dependent diabetes mellitus. It mainly affects people over 40, many of whom are overweight and have a diet with excess kilojoules. In the early stages, it is usually controlled by a proper diet alone, but often tablets may have to be taken, and eventually insulin may also be needed to bring the diabetes under control. People with type 2 diabetes often have a strong family history of the disease.

What are the symptoms?

The classic symptoms of high blood sugar are:

- excessive and frequent urination (every hour or so)
- excessive thirst
- loss of weight (mainly in type 1)
- tiredness and lack of energy
- a tendency to get infections, especially of the skin
- slow healing wounds.

How common is the problem?

About 1 person in 25 gets diabetes. It tends to increase as we get older because the pancreas, like other organs, tends to

wear out. On the other hand the body can become resistant to insulin.

What are the risks?

Modern treatment is very effective for diabetes, but the results depend on the patient following the treatment, especially the diet. If diabetes is untreated, the complications are very severe and include coma (from the blood sugar being either too high or too low). Diabetes also causes damage to the large and small arteries of the body and this in turn can cause nerve damage, kidney disease, blindness and heart disease. The feet and eyes are at special risk and need special care and regular checks to avoid serious complications.

Can diabetes be cured?

No, not yet, but it can virtually always be controlled by a proper diet and regular exercise, and if necessary insulin or special tablets. Although the diagnosis comes as a shock to patients, with good management of the condition, most people with diabetes lead normal lives. A key factor is to get good control of blood pressure as well as blood sugar and cholesterol. A healthy diet and exercise are vital.

Is diet a vital treatment?

Yes; all diabetics require a special diet in which carbohydrate and fat intake is controlled. The objectives of the diet are to:

- keep to ideal weight (neither fat nor thin)
- keep the blood sugar level normal and the urine free of sugar.

This is achieved by:

- eating good food regularly (not skimping)
- spacing the meals throughout the day (three main meals and three snacks)
- cutting down fat to a minimum
- avoiding sugar and refined carbohydrates (e.g. jam, honey, chocolates, sweets, pastries, cakes, soft drinks)
- eating a balance of more natural complex carbohydrates (starchy foods) such as wholemeal bread, potatoes and cereals
- eating a good variety of fruit and vegetables
- cutting out alcohol or drinking only a little
- learning about glycaemic index (GI) foods and preferably eating low-GI foods.

Note: Exercise is very important!

Basic aims of treatment

- Blood glucose (fasting): 6.1 to 8 mmol/L
- HbA1c (a key test): less than 7%
- Total cholesterol: less than 4
- Blood pressure: less than 130/80
- Ideal weight, and waistline no greater than 94 cm for men and 80 cm for women
- Body mass index (BMI) less than 26
- Low-fat, high complex carbohydrate diet
- No cigarettes
- No or minimal (2 or less standard drinks [20 gm] per day) alcohol
- Exercise: at least 30 minutes walking (e.g. 2 km per day), 5 or more days a week (150 minutes per week). Also aerobics, tennis, swimming, etc.

Diabetes: type 1

What is type 1 diabetes?

Type 1 diabetes is one of the two main types of diabetes. It was also formerly known as juvenile onset diabetes or insulin dependent diabetes. It can develop at any age but most commonly occurs in people under 30 years, especially in children. Its peak incidence is between 10 to 30 years, but it can also develop in babies.

In juvenile diabetes, the pancreas cannot produce enough insulin because it is destroyed by the body's immune system; therefore patients require injections of insulin. The cause is unknown. The other type is type 2 diabetes, also known as maturity onset diabetes, and it mainly affects people over 40 years.

What are the symptoms of type 1 diabetes?

The classic symptoms of type 1 diabetes include:

- excessive and frequent urination
- excessive thirst
- loss of weight
- hunger
- tiredness and lack of energy
- a tendency to get infections, especially of the skin
- itching of the skin.

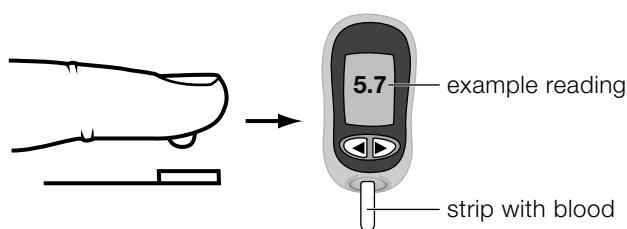
What are the risks of type 1 diabetes?

The risks are best remembered by the mnemonic KNIVES: damage to kidneys, nerves (especially of feet), infection, vessels, eyes and skin. Damage to the blood vessels can also increase the risk of heart disease and strokes. Another concern for the type 1 diabetic is when the blood sugar becomes too low (called hypoglycaemia) or too high (ketacidosis), since both situations can cause a dangerous coma.

- Hypoglycaemia (a 'hypo') tends to occur when a person injects too much insulin, skips a meal or exercises heavily. The symptoms include hunger, dizziness, sweating, tremor, palpitations and mood change.
- Ketoacidosis is caused by lack of insulin and tends to occur in brittle (difficult to control) diabetes and usually during an illness when insulin is not taken. Warning symptoms are drowsiness, vomiting, abdominal pain and rapid breathing. Ketones appear in the blood and urine. Hence, insulin should never be stopped in a person with type 1 diabetes who is on it.

What is the treatment of type 1 diabetes?

Insulin is injected daily according to your doctor's instructions. The blood sugar level is monitored by testing droplets of blood



A modern electronic glucometer

in a glucose meter (glucometer) 4 times a day at first, and any development of ketones is tested by a urine test strip.

A good diet as advised by your doctor and dietitian is essential and a regular exercise program is a fundamental requirement of good management. The diet should be low in fat, high in complex carbohydrates and include fruit, vegetables, beans, wholemeal bread and cereals. Sugar, refined carbohydrates and alcohol should be avoided.

The aim of the treatment and education program is to allow the child or adult to live as normal a life as possible, with encouragement to participate in all activities.

How are 'hypos' managed?

Hilos can be remedied by a quick boost of glucose such as sugar in the mouth or an equivalent carbohydrate dose followed by a carbohydrate meal. One dose of carbohydrate can be any one of 6 jelly beans, 2 barley sugars, teaspoon of honey or a glass of lemonade. Don't repeat a dose unless you still feel unwell 10 minutes later. It is advisable to have lollies such as jelly beans on hand at all times.

What about sports activities?

There is no reason why a diabetic child cannot play most sports. Exercise is good for both social development and fitness. Insulin doses may need to be adjusted prior to active sport to allow for the increased 'burning up' of glucose associated with physical activity. Actually additional carbohydrate may be needed.

How are sick days managed?

It is important that insulin is continued even if the child is not eating much or the illness is accompanied by feeling sick (anorexia), nausea or vomiting. You should have a pre-arranged action plan for sick days, but ring your doctor or hospital for individualised advice. In fact, you may need more insulin if you are eating little, vomiting or have diarrhoea.

When sick, maintain the normal meal plan if possible, increase fluid intake, increase blood glucose measurement to 3 or 4 times a day and check urine or blood for ketones. Extra insulin should be rapid or fast acting.

What about attending school?

Children should attend school and participate in all school activities. The school staff should be notified of the child's diagnosis and management issues, especially if hypos develop.

Points to remember

- Stress, illness or too much food will push your glucose up.
- Exercise and medications will pull your glucose down.
- Take your insulin every day, even if you feel ill.
- Have a negotiated action plan for sick days.
- A minor illness can result in a major rise in blood glucose levels.
- Do not change your insulin dose unless instructed.
- Ketoacidosis requires hospital care.

Diabetes: type 2

What is type 2 diabetes?

Type 2 diabetes is one of the two types of diabetes and was previously also known as *mature onset diabetes* (because it usually affects people over 40 years) or *non-insulin dependent diabetes*. Recognised as a lifestyle disease, it is the most common form of diabetes and accounts for about 85–90% of all people with diabetes. It has a strong association with being physically inactive and overweight. The other is type 1 diabetes, previously also called *juvenile diabetes* or *insulin-dependent diabetes*.

In type 1 diabetes the pancreas cannot make insulin, while in type 2 diabetes the body cells develop insulin resistance, cannot respond to the insulin effectively and the pancreas cannot produce enough insulin for the body's needs. Type 2 diabetes tends to run in families.

What are the symptoms?

The puzzling thing about type 2 diabetes is that it often has no symptoms and many thousands of people are carrying on with life unaware that they have a serious disorder. About half of those who do have it have not yet been diagnosed.

Common symptoms of high blood glucose levels are:

- excessive and frequent urination
- excessive thirst
- tiredness and lack of energy
- a tendency to get infections especially of the skin
- slow healing wounds
- mood swings
- itching, especially of genitals.

Some people have a relatively minor degree of symptoms that they attribute to other factors such as getting older.

How common is type 2 diabetes?

Diabetes, especially type 2, is a very common disease that is rapidly increasing throughout the world. About 1 person in 25 gets diabetes. It increases as we get older because the pancreas, like other organs, tends to wear out. In Australia 7% of adults and 20% over 60 years have diabetes.

Who is at risk of type 2 diabetes?

- People aged 55 and above
- People aged 35 and over who are Pacific Islanders, Aboriginal and Torres Strait Islanders, from the Indian subcontinent, Chinese or of Afro-Caribbean origin
- People aged 45 and over who are obese or overweight, have a first-degree relative with type 2 diabetes or have hypertension

- Women who have had gestational diabetes
- Overweight women with polycystic ovarian syndrome
- People with cardiovascular disease such as coronary disease and strokes
- People on long-term cortisone

What are the lifestyle risk factors?

- Sedentary lifestyle/low physical activity
- Overweight and obesity, especially of waist
- High blood pressure
- High blood cholesterol
- Cigarette smoking
- Unhealthy eating habits (e.g. refined sugar, high fat, fast foods)

People at risk should have a blood glucose test organised by their doctor. There are several tests used by doctors, including a fasting blood glucose test and a special test called a glucose tolerance test, which measures the rise in blood glucose levels after a test drink of glucose.

How is type 2 diabetes managed?

The key to successful control is through a disciplined lifestyle based on a proper diet and physical activity. It is useful to follow the NEAT rule of lifestyle:

- **N** is for nutrition: Have a special diet with control of fat and carbohydrate intake. Keep to ideal weight and a normal blood sugar. Consult a dietitian or diabetes educator.
- **E** is for exercise: At least 30 minutes walking 5 or more days a week. Also consider aerobics, swimming, tennis, other sports or a personal trainer.
- **A** is for avoidance (or moderate intake) of toxic substances, as illustrated by 'CATS', namely caffeine, alcohol, tobacco, sugar, sweets, salt, social drugs.
- **T** is for tranquillity, including rest and recreation, stress management and activities like yoga and tai chi.

Medication

If diet and exercise are insufficient, your doctor will prescribe tablets called oral hypoglycaemics to control your blood glucose. Sometimes insulin may need to be added.

The aim of diabetic treatment is to maintain blood glucose within the normal range of 6.1 to 8.1 mmol/L before meals and 6.0 to 10.0 mmol/L two hours after meals. This will help prevent long-term problems. It is also important to keep your weight, cholesterol and blood pressure within the recommended limits and for your doctor to look for any complications in your eyes, kidneys, feet, nerves and heart.

Diabetes: blood glucose monitoring at home

How do you check blood glucose levels?

Put blood from a finger prick on a test strip. Insert the strip into the electronic meter. It is important to follow the instructions on the bottle or meter carefully.

When should you check the levels?

Routinely

For type 2 diabetes (usually controlled by diet and tablets, or by diet alone), 2 to 3 times each week at different times of the day is enough.

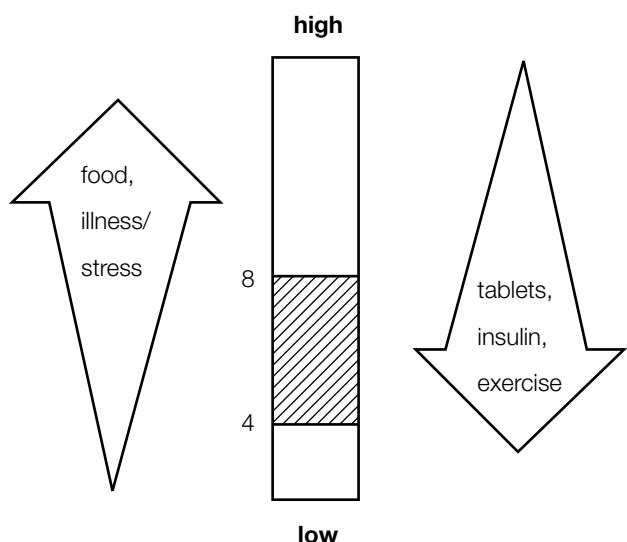
For type 1 diabetes (which requires insulin), more regular checking is required; that is, at least twice a day, usually first thing before breakfast and then about 2 hours after a meal.

Your blood glucose levels are likely to be low before meals, and high for 2 hours after meals.

Special circumstances

Stress, illness or too much food will push your blood glucose up. Exercise and your medications will pull the blood glucose down.

When you are ill or under a lot of stress or exercising more than usual, you may need to check your blood glucose level more often than usual.



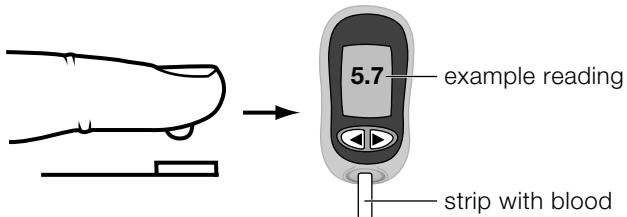
Blood glucose levels

What are the ideal levels?

- Ideal blood glucose levels are 6.1 to 8.1 mmol/L before meals and 6.0 to 10.0 mmol/L 2 hours after meals.
- Poor control is over 8.1 mmol/L before meals and over 11 mmol/L after meals.

Key points

- Check your blood glucose regularly, and record the result, and the date and time of the test.
 - Be careful to follow the instructions accurately.
 - Ideal blood glucose levels are between 6.1 and 8 mmol/L before meals.
 - If you are ill or under stress, your blood glucose level is likely to go up. You should check it more often than usual, and see your doctor if it does go up.
- Don't forget to record the date, time and result of your blood tests and take your record book with you to doctor's appointments.



A modern electronic glucometer

Diabetes: foot care for diabetics

Why are doctors so concerned about your feet?

Problems with the feet are common complications of diabetes and need special attention. A foot problem can be very difficult to heal once it has set in. Diabetes can decrease the circulation to your feet so that healing is relatively poor. Diabetes can also affect the nerves to the feet so that they are less sensitive to pain, touch and temperature. Diabetics are also prone to infection because the feet are almost 'out of sight and out of mind' and problems can develop without your being aware of them. Very special care of your feet is essential, and they should be checked by you every day and regularly by a podiatrist.

What type of problems occur?

Pressure sores can develop on the soles of your feet from things such as corns, calluses and stones in your shoes. Minor injuries such as cuts and splinters can become a major problem through poor healing. Problems with toenails such as paronychia (infection around the nail) and ingrowing nails can get out of control. Prevention of these problems is best. Watch out for soggy skin between the toes.

What should you do?

1. Keep your diabetes under good control and do not smoke.
2. Check your feet daily. If necessary use a mirror to inspect the soles. If your vision is poor ask someone else to check for you. Report any sores, infection or unusual signs. Make sure you check between the toes.
3. Wash your feet daily:
 - Use lukewarm water (beware of scalds).
 - Dry thoroughly, especially between the toes.
 - Soften dry skin, especially around the heels, with lanoline.
4. Attend to your toenails regularly:
 - Clip them straight across with clippers.
 - Do not cut them deep into corners or too short across.
 - File any rough edges.

5. Wear clean cotton or wool socks daily; avoid socks with elastic tops.
6. Exercise your feet each day to help the circulation in them.
7. Check the insides of your shoes each week or before wearing them to make sure no nails are pointing into the soles.

How to avoid injury

- Wear good-fitting, comfortable leather shoes.
- Shoes should never be 'broken in' —they should fit from the start.
- The shoes must not be too tight or too loose.
- Do not walk barefoot, especially outdoors.
- Do not cut your own toenails if you have difficulty reaching them or have poor eyesight.
- Avoid home treatments and corn pads that contain acid.
- Be careful when you walk around the garden and in the home. Sharp objects such as stakes in the garden, protruding nails and sharp corners of beds at floor level should never be in the home of a diabetic.
- Do not use hot-water bottles or heating pads on your feet.
- Do not test the temperature of water with your feet.
- Take extra care when sitting in front of an open fire or heater.

Treating cuts and injuries

If you do get a cut or other injury:

- Clean the wound with a mild antiseptic such as liquid Savlon or diluted Betadine.
- Cover it with clean gauze and surgical tape.
- Have your doctor check the wound if you are concerned, especially if it does not heal in 2 days or has signs of infection such as redness, heat and tenderness.

Visit the expert

If you have problems with your foot care and especially if your physical condition makes attending to toenails, corns and calluses difficult, you should visit a podiatrist. Your doctor will advise you.

Diabetes: healthy diet for diabetics

Diet is the key to controlling both type 1 and type 2 diabetes.

A proper diet for people with diabetes is based on a healthy eating plan that applies to all people. There is no need to prepare separate meals or buy special foods.

The basis of the diet is reduction in total energy from fat and sugar and having a high-fibre complex carbohydrate diet of foods such as wholemeal bread, rolled oats, pasta, beans, lentils, apples and low-sugar breakfast cereals.

Meals should be eaten at regular times and spread throughout the day. It is good to be advised by a diabetic nurse educator or dietitian.

Simple healthy guidelines

- Limit sugar in your diet.
- Limit fat.
- Limit alcohol.
- Drink lots of water.
- Reduce salt in cooking and on food.
- Eat a variety of fruit, vegetables, cereals and bread.
- Eat fish regularly.
- Eat a high-fibre diet.
- Eat high-fibre carbohydrate: wholemeal cereal and breads.

Objectives

- Achieve an ideal weight through diet and exercise (most important).
- Maintain a diet low in fat and sugar and high in fibre and complex carbohydrates.
- Aim to eat a complex carbohydrate at each meal.
- Keep the fasting blood sugar below 6 mmol/L.

Fat in the diet

People generally eat too much fat and it should be reduced.

Common sources of fats and oils are:

- high-fat dairy products
- high-fat meats
- fats added to cooking
- snack and takeaway foods
- processed sausages and smallgoods.
- When you eat fats, choose mainly monounsaturated or polyunsaturated fats and oils.

Carbohydrates and the glycaemic index (GI)

Carbohydrates are good for people with diabetes as they provide a ready source of essential glucose in the blood stream. However, different carbohydrates affect blood glucose levels differently.

It is best to prevent your blood glucose level from swinging too high or too low. The 'best choice' carbohydrates are those

that cause the smallest rise in blood glucose levels because they are digested slowly and released slowly. As a general rule the slow-acting carbohydrates that are rich in fibre—the complex carbohydrates—are best. These are called low glycaemic index or low-GI foods ('glycaemic' is a term for blood glucose).

The glycaemic index is related to a standard of 100 represented by taking 50 grams of glucose. It has a scale of 1 to 100. High-GI foods are those above 70. Low-GI foods are those below 55.

It is good to have at least one low-GI food at each meal.

Examples of low-GI foods

- Cereals: Porridge, oat bran, Special K, muesli, All-Bran.
- Breads: Wholegrain, fruit loaf, sourdough, raisin bread, pumpernickel.
- Fruit: All fresh fruit, especially apples, firm bananas, oranges, stone fruit, grapes; canned fruit in natural juice.
- Vegetables: All fresh, frozen and canned vegetables.
- Dairy: Milk (especially skim, low-fat), yoghurt, low-fat cheese (e.g. cottage).
- Starchy foods: Sweetcorn, lentils, pasta, noodles, basmati rice, brown rice, sweet potato, dried beans and baked beans.
- Snacks: Prunes, dried apricots, nuts, Vita-Weat biscuits, Snack Right biscuits, peanuts, dark chocolate.

Examples of high-GI foods

- Cereals: Cornflakes, Rice Bubbles, Coco Pops, Nutrigrain.
- Breads: White, wholemeal, crumpets, scones, bagels, French bread.
- Fruits: Watermelon, dates, ripe bananas.
- Dairy: Cream, butter, ice-cream, cheese.
- Starchy foods: Potato (including baked, mashed, boiled and chips), regular rice, Calrose and jasmine rice.
- Snacks: Pretzels, Twisties, glucose lollies, most biscuits, water crackers, rice cakes, raisins, corn chips, cordials.

Other general advice

- Use low-fat cooking methods.
- Use low-fat spreads (e.g. light margarine, ricotta or cottage cheese).
- Eat moderate amounts of protein (e.g. lean meat, skinless poultry, seafood, eggs (not fried), legumes, unsalted nuts).
- As a rule avoid foods that contain large amounts of added sugar, for example sweets, cakes, sweet biscuits, chocolates, soft drinks, jellies and desserts (can be eaten occasionally).
- Discuss a personalised meal plan with your dietitian or doctor.
- No special diet is usually required. It is not necessary to buy separate foods or prepare separate meals.
- The GI of common foods can be found at the website www.glycemicindex.com.

Diabetes: insulin injections

The proper injection of insulin is very important to allow your body, which lacks natural insulin, to function as normally as possible. You should be very strict about the way you manage your insulin injections and have your technique down to a fine art.

Common mistakes

- Poor mixing technique when mixing insulin.
- Wrong doses (because of poor eyesight).
- Poor injection technique—into the skin or muscle rather than the soft, fatty layer.
- Not taking insulin when you feel ill.

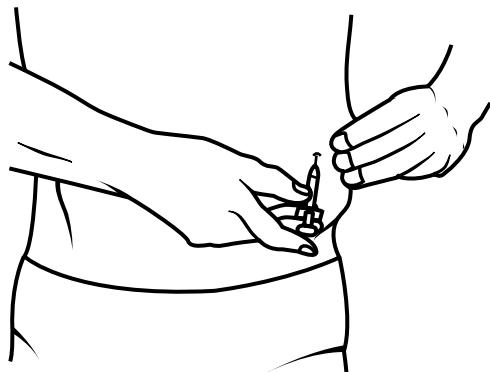
When to inject insulin

Develop a set routine, including eating your meals on time and giving the injections about 30 minutes before your meal.

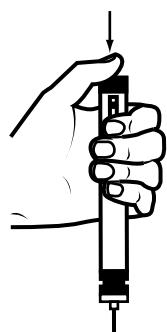
Where to inject insulin

The injection should go into the fatty (subcutaneous) tissue between the skin and muscle. The best place is the abdomen below the navel. Other suitable areas are the buttocks and thighs. These areas have a good layer of fat under the skin and are free of large blood vessels and nerves. It is advisable to stick to one area, and the abdomen is recommended. Avoid giving injections into your arms, near joints, the navel and the groin.

Do not inject too often into the same small area (it can damage the tissue). Give the injection at a different place each time. Keep a distance of 3 cm (1½ inches) or more from the last injection.



Insulin syringe method



An injection pen

How to inject insulin

This depends on the insulin injection device; those in common use are insulin syringes and insulin delivery pens. The techniques should be explained to you.

Insulin syringe method

- Lift up or pinch a large area of skin on your abdomen between your thumb and fingers.
- Hold the syringe in your other (dominant) hand between your thumb and middle finger: this leaves the index finger free to push the plunger. Breathe in and out.
- Insert the needle straight in (like a dart) at right angles to the skin (push the needle well in but not into the muscle).
- Push the plunger all the way down.
- Quickly withdraw the needle.
- Press down firmly (do not rub or massage) over the injection site for up to 60 seconds.

Drawing up the insulin

Make sure your technique is checked by an expert.

You may be using either a single insulin or a mixed insulin. A mixed insulin is a combination of shorter- and longer-acting insulin and is cloudy.

Rules for mixing

- Always draw up clear insulin first.
- Do not permit any of the cloudy insulin to get into the clear insulin bottle.
- Do not push any of the clear insulin into the cloudy insulin bottle.

Drawing up rules

- Wash and dry your hands beforehand.
- Gently roll the insulin bottle between your hands to mix—do not shake it.
- Always draw up air equal to the dose of insulin into the syringe.
- Always expel air bubbles and ensure that you do not inject air.

Insulin delivery pen

Follow the instructions in the manual and according to your educator:

- Screw a new needle tightly onto the cap.
- Perform an 'air shot' to expel bubbles of air.
- Dial the correct number of units.
- Insert the needle at 90° to the skin of the abdomen (or thigh or arm).
- Push the button down fully to inject insulin into subcutaneous tissue.
- Count slowly to 6 and withdraw.
- Remove the needle and discard it.

Golden rules

- Take your insulin every day, even if you feel ill.
- Do not change your dose unless instructed.
- Carefully dispose of used syringes and pen needles.

Diarrhoea: acute diarrhoea in adults

What is diarrhoea?

Diarrhoea is the passage of many loose, watery, offensive bowel movements. It is a symptom, not a disease. It is usually associated with colic-type abdominal pain and often with vomiting. It invariably is a self-limiting problem (i.e. it gets better naturally). It is commonly caused by an infection of the intestines such as gastroenteritis or food poisoning.

What are gastroenteritis and enteritis?

Gastroenteritis means infection of the gastrointestinal tract from the stomach to the intestine. It causes vomiting and/or diarrhoea and is very common in children.

'Gaster' is the Greek word for stomach or belly and gastritis means inflammation of the stomach. It causes vomiting. 'Enteron' is the Greek word for intestine and enteritis is inflammation of the intestine. It causes diarrhoea. Sometimes enteritis occurs in isolation without gastritis. A classic example is typhoid, which is also called 'enteric fever'.

What causes it?

Diarrhoea is usually caused by a viral or a bacterial infection from contaminated food and water. Common infectious agents are:

- viruses (e.g. rotavirus, norovirus)
- bacteria (e.g. E. coli, Campylobacter, Shigella, Salmonella, *Staphylococcus aureus*)
- parasites (e.g. *Giardia lamblia*, *Cryptosporidium*)

The germs infect the lining of the intestines which become irritated and inflamed. This affects the absorption of water from the faeces.

Most episodes last for such a short time that a search for the cause is not necessary. However, if it lasts for 12 hours or longer, medical attention is needed. If it is associated with continuous vomiting, fever and the passage of blood, pus and mucus, it requires close attention. The faeces and blood may need to be tested.

Uncommon infections to be excluded are typhoid and cholera, as well as parasite infestations with *Giardia lamblia* and amoebae. If you have diarrhoea on returning from overseas, it must be checked out. *Giardia lamblia* infection produces ongoing abdominal cramps, flatulence and bubbly foul-smelling diarrhoea. It is often misdiagnosed.

A common problem is traveller's diarrhoea, which is usually caused by *E. coli* from contamination by faeces in water supplies. It affects people whose stomachs are not immune to the germ. People can even acquire this problem in their own First World country.

Other possible causes are acute appendicitis, rich food, prunes, food allergy (e.g. dairy products), alcohol, emotional upset, prescribed drugs such as antibiotics and anti-arthritis agents, and excess vitamin C.

What is the treatment?

Rest

Your bowel needs a rest and so do you. It is best to reduce your normal activities until the diarrhoea has stopped.

Diet

It is important that you avoid solid food at first, but drink plenty of fluids to prevent dehydration, including small amounts of clear fluids such as water, tea, diluted cordial and yeast extract (e.g. Vegemite), or an electrolyte solution such as Gastrolyte or Hydrolyte, until the diarrhoea settles. Then eat low-fat and starchy foods such as stewed apples, rice (boiled in water), soups, poultry, boiled potatoes, mashed vegetables, mashed bananas, dry toast or bread, biscuits, most canned fruits, jam, honey, jelly, dried skim milk or condensed milk (reconstituted with water).

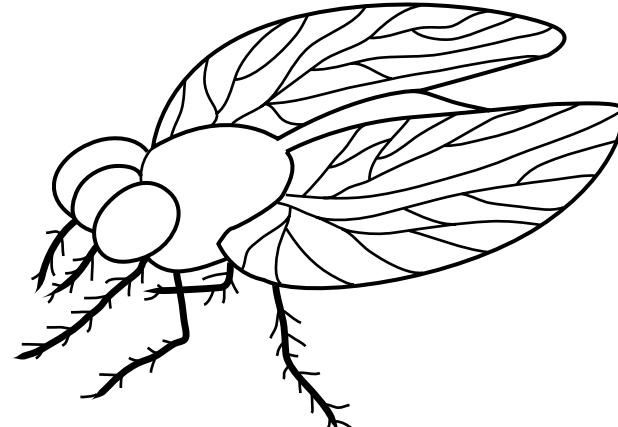
Avoid alcohol, coffee, strong tea, fatty foods, fried foods, spicy foods, raw vegetables, raw fruit (especially with hard skins), spicy Asian food, wholegrain cereals and cigarette smoking.

On the third day introduce dairy produce such as yoghurt containing live cultures, a small amount of milk in tea or coffee and a little butter or margarine on toast. Add also grilled lean meat and fish (either grilled or steamed).

Medication

Diarrhoea usually settles without the need for medicine. It is best to avoid medicines for diarrhoea; however, if it is socially embarrassing, kaolin-based preparations or intestine-slowing drugs such as loperamide (e.g. Imodium, Gastro-stop) or Lomotil can be helpful.

Antibiotics should be avoided unless directed by your doctor.



Flies are important carriers of 'gastro' germs

Prevention of spread of infection

Most cases, especially viral, are very infectious to others. Carefully wash hands after going to the toilet and before handling food. A self-drying alcohol hand gel (e.g. Arium) is ideal. Carers must do likewise. Stay at home if possible, ideally until 48 hours after diarrhoea ceases.

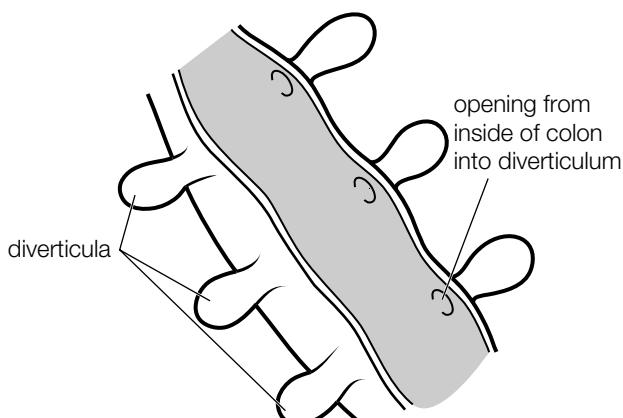
Avoid visiting schools, childcare centres, hospitals and nursing homes. Don't swim in public pools.

Diverticular disease

What is diverticular disease?

Diverticular disease (also called diverticulosis) is the presence of small blind sacs or pouches called diverticula in the wall of your large bowel (colon). It is related to a lack of fibre in your diet. About 1 person in 3 over the age of 60 years throughout the Western world has this problem.

It is not really a disease, but a condition in which small pouch-like swellings hang from the bowel wall. Infection in such a pouch is called diverticulitis.



Colon open to show appearance of diverticula

What is the cause?

Normally, the large bowel moves the faeces along its length with gentle rhythmic contractions of muscles in the bowel wall—this is called peristalsis. Without adequate fibre in the diet the motion is dry, small and difficult to move along. The intestinal muscles must therefore perform strong contractions and generate high pressure. This high pressure may push the inner lining through the weaker spots in the wall, rather like blowing up a balloon. The pockets or pouches formed are called diverticula. You may have many of these diverticula along the length of the large bowel. Risk factors include ageing, low-fibre diet and a genetic predisposition. It tends to run in families, suggesting there is a familial predisposition. Constipation leading to straining to move and open your bowels is a predisposing factor.

What are the symptoms?

Diverticular disease rarely causes symptoms and most people have it without knowing. A lack of fibre in the diet can cause you to experience bloating, flatulence (desire to pass wind) and abdominal pains.

Are there any tests?

There are two tests done to confirm diverticular disease. The first is sigmoidoscopy or colonoscopy. A hollow tube is passed into the back passage, through which your doctor can see the bowel lining. The second is a barium enema. Barium dye is inserted into the back passage; a series of X-ray films clearly show diverticula outlined by use of this dye.

Are there any complications?

Possible complications are infection and bleeding, which are uncommon. If infection (diverticulitis) develops, you will experience abdominal pain, usually sharp pain in the lower left half of the abdomen, nausea and fever. These symptoms or any bleeding require prompt attention by your doctor. Complications of diverticulitis include abscesses, bowel perforation with possible peritonitis (inflammation throughout the abdominal cavity) and haemorrhage (bleeding).

What is the treatment?

Diverticulosis

It is important to avoid constipation. The gradual introduction of fibre with plenty of fluids (especially water) will improve any symptoms you may have and reduce the risk of complications. Your diet should include:

1. cereals, such as bran, shredded wheat, muesli or porridge
 2. wholemeal and multigrain breads
 3. fresh or stewed fruits and vegetables, especially greens.
- Bran can be added to your cereal or stewed fruit, starting with 1 tablespoon and gradually increasing to 3 tablespoons a day. Fibre can make you feel uncomfortable for the first few weeks, but the bowel soon settles to your improved diet. Regular exercise promotes healthy peristalsis (movement of the bowel).

Diverticulitis

The bowel needs a rest, so nothing should be eaten or drunk; intravenous fluids will be given until it settles. Antibiotics and analgesics will also be given.

Surgical treatment

Sometimes elective surgery is performed to remove seriously affected bowel segments that cause frequent complications.

Note

Any unusual symptoms, such as bleeding from the back passage, weight loss, constipation, diarrhoea and other changes in your normal bowel habit, may be a sign of bowel cancer. If they occur, report them to your doctor.

Dry skin

Dry skin is a common problem, especially in people with atopic dermatitis (eczema). It is rough, scaly skin that is dry to touch and less elastic than normal skin. Some people describe it as feeling like sandpaper. It is especially common in cold, dry climates.

What causes dry skin?

The main feature is a lack of water or moisture in the skin surface. It also appears to be caused by a relative lack of natural oils. However, the main problem is insufficient water to moisturise the skin.

What are the effects of dry skin?

It is not a serious medical problem. One of the worst irritating effects is itching. Cracking of the skin (particularly of the legs) can occur in older people, especially in winter. People often complain of a 'crawling' sensation in the skin. Dry skin does not cause wrinkles.

What makes dry skin worse?

- Too much washing and bathing (too long and too often)
- Use of very hot water
- Use of traditional alkali soaps
- Cold weather
- Low humidity and artificial heating
- Dry air
- Overexposure to wind and cold
- Poor diet

What is the treatment?

Washing and bathing

It is important not to have frequent long baths or showers. Reduce the number and length of baths and showers. It is probably better to avoid baths, swimming in pools and bathing in spa baths. Concentrate on having short showers and perhaps at times have the so-called APC (armpit and crutch) scrub with soap and water instead of a shower or bath.

Use tepid water instead of hot water.

Bath oils

The addition of oils to baths helps to seal in moisture in the skin. However, you must be careful not to slip getting in and out of the tub, as bath oils make the tub surface slippery.

Soaps

Avoid using the traditional alkali soaps and harsh soaps. Use soap substitutes such as Dove, Neutrogena or Cetaphil lotion. Less-expensive soaps such as oatmeal soap, which are readily obtained from health shops, can also be used.

After showering

After you shower, do not rub hard with a towel but pat dry, and then rub a bath oil or mild baby oil into the skin.

Clothing

Avoid wearing wool next to the skin. Do not wear heavy woollen clothing. Wear cotton clothing.

Skin softeners and lubricants

Apart from various mineral oils and Vaseline Intensive Care, preparations that soften, lubricate and soothe the skin include QV skin lotion, Alpha Keri lotion and Nutra-D cream.

Moisturisers

Although skin softeners act as moisturisers, the urea-based moisturisers can help make the skin more soft and supple. Examples are Nutraplus, Calmurid, Redwin sorbolene, Vitamin E and glycerine lotion, and Aquacare HP. Another suitable moisturising agent is QV cream.

Diet

Eat a well-balanced diet. Drink ample water during the day.

Key points

- Dry skin lacks surface moisture.
- Avoid excessive bathing and showering.
- Take shorter and cooler showers.
- Apply skin softener or moisturiser after showering.
- Use soap substitutes.
- Avoid wool and heavy clothing next to skin.
- Avoid overheating and dryness in rooms.
- Follow a good diet.
- Drink plenty of water.

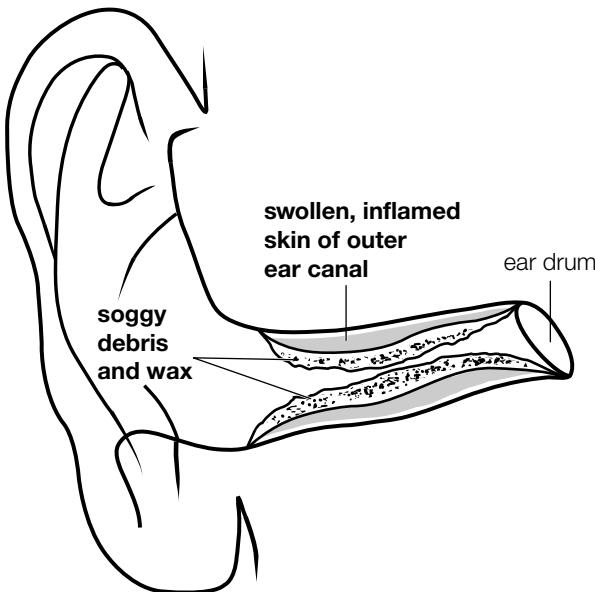
Ear: otitis externa

What is normal?

The outer ear canal is a tunnel that runs from the ear hole to the ear drum. It is about 3 cm long and is lined with normal skin containing hairs and glands that produce wax (see diagram). The outer ear canal is a blind (closed) tunnel and normally drains only through the ear hole.

What is otitis externa?

Otitis externa is a condition in which the skin lining the outer ear canal becomes red and swollen due to infection. This infection occurs commonly because of water, especially 'dirty' water, entering the ear canal and is sometimes referred to as 'swimmer's ear' or 'surfer's ear'. In the tropics, the heat and high humidity cause people to perspire excessively in summer, and this moisture may also play a part in causing otitis externa or 'tropical ear'.



The ear canal is subject to infection

What are the symptoms?

Pain and tenderness of the ear canal are typical, and in severe cases the pain and tenderness may spread to the outer ear and surrounding skin. Other symptoms include discharge from the outer ear canal, itching, 'fullness' in the ear canal and reduced hearing.

What are the infecting organisms?

These are bacteria, fungus or a combination of the two.

- Bacteria include:
 - *Pseudomonas*
 - *E. coli*
 - *Staphylococcus aureus*
 - *Proteus*.

- Funguses include:
 - *Candida albicans*
 - *Aspergillus*.

Why does it occur?

Water entering the outer ear canal can drain only through the ear hole. The outer ear canal is horizontal and curved; it may contain wax. Water may not drain freely and can cause skin to become soggy, so allowing bacteria or fungi, normally present on the skin, to cause infection.

Who is more prone to otitis externa?

You are more likely to suffer from otitis externa if your outer ear canal is narrow or long, or if the skin lining the canal is in poor condition (i.e. if it is not waterproofed by the wax and is wet by regular swimming). Incidentally, chlorinated fresh water is more damaging than salt water.

The skin lining will deteriorate too if it is prone to dermatitis or eczema and if exposed to chemicals (e.g. hair shampoo, hair dyes and ear ointments). The ear canal can be damaged by attempting to clean it with a cotton bud or other object.

What is the treatment?

The basis of successful treatment is to clean the canal and keep it empty and dry. In mild cases your doctor will treat the infection by cleaning the outer ear canal using suction or a probe under direct vision and then prescribing cream (or ear drops) to insert several times a day. The ear drops are used for about 5 days and contain chemicals that kill the bacteria or fungus causing the infection.

If the infection is severe and the outer ear canal is swollen, the doctor may insert a cotton wick coated with the healing solution into the ear canal, and may prescribe antibiotic tablets.

Pain-killing drugs should be taken, especially for severe pain.

How can otitis externa be prevented?

You can take a number of steps to prevent otitis externa. Among them are:

- Avoid getting water in your ear.
- If water enters, shake it out or use Aqueear drops.
- Use moulded earplugs or a bathing cap when swimming.
- Use earplugs or a cap when showering.
- Use earplugs when washing your hair.
- Avoid poking objects such as hairpins and cotton buds in the ear to clean the canal.

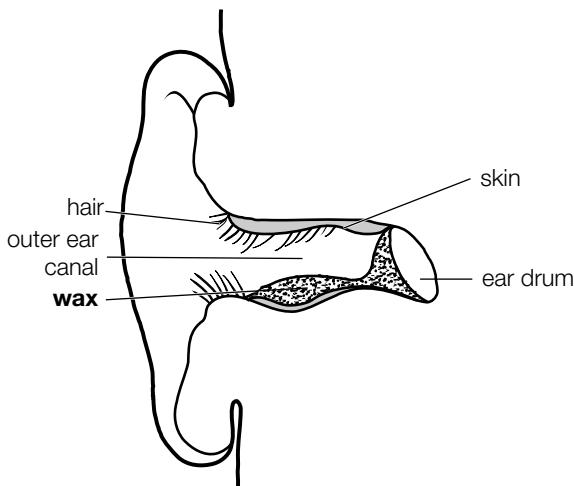
The ear usually cleans itself naturally. Do not attempt to clean it and risk infection of the canal or damage to the ear drum. If you have a problem, contact your doctor for advice and treatment.

Ear: wax in your ear

What is normal?

The outer ear canal is a tunnel that runs from the ear hole to the ear drum. It is about 3 cm long and lined with normal skin containing hairs and small glands that produce wax called cerumen. The purpose of the wax is to protect the skin of the ear canal and give it a waterproof coating.

Wax is therefore quite normal and people should not feel embarrassed about it building up in their ears. Excessive wax is one of the most common problems seen by doctors, who are aware of the discomfort it can cause.



Excessive wax in the ear

How does excessive wax develop?

The glands can produce too much wax or there can be a problem preventing normal drainage of the wax out of the ear. The risk factors include:

- a tendency to produce lots of ear wax
- certain skin conditions (e.g. seborrhoeic dermatitis)
- working in dusty conditions
- hairy ear canals
- narrow ear canals
- excessive cleaning of ear canal with cotton buds, fingers and other objects.

What are the symptoms?

Symptoms of a wax plug in the ear include:

- mild deafness such as muffled sounds
- a sensation of fullness inside the ear

- earache
- tinnitus (ringing in the ears)
- dizziness.

The main symptom is a feeling of fullness.

Most people are not aware that their ear is full of wax until they have a hearing problem or a waxy discharge, but if an infection develops in the skin under the wax the ear might itch and ache.

Hearing can be affected by the wax pressing against the ear drum, making it rigid; even a small amount of wax can cause this.

The wax can be pressed onto the drum by:

- water (when swimming or showering)
- earplugs
- objects inserted in the ear, such as cotton-tipped applicators.

What is the treatment?

The doctor can remove excess wax by syringing the ear with water, using a suction instrument or cleaning it out with a fine probe or with an ear syringe.

Before treatment you might be asked to use wax-softening drops in the ear for at least 2 days. Some people find that the drops cause a burning sensation. If this happens, stop using them immediately and notify the doctor.

Any inflammatory skin conditions of the ear should also be treated.

How can wax problems be prevented?

If you have a tendency to build up wax in the ear, you might be advised to use the ear drops regularly to soften the wax so that it can drain out.

If you use a hair dryer cover your ear with your hand since the hot air can harden the wax in your ear.

Cleaning the ear

The ear canal has a self-cleaning action that allows natural and unnoticeable removal of the wax. So, the ear should be left alone: 'Never put anything smaller than your elbow in the ear'. Avoid cleaning the ear canals with cotton buds and fingers because it compacts the wax against the ear drum.

If you have a wax problem, see the doctor for advice and treatment. Do not try to fix it yourself: you might cause an infection in the ear canal, or damage the ear drum and affect your hearing permanently.

What is ecstasy?

Ecstasy is an illicit stimulant drug derived from the amphetamine family of psychostimulants used to speed up the activity of the brain. The primary chemical is methylenedioxymethamphetamine (MDMA), which was originally developed as an appetite suppressant. It is a synthetic (not natural) drug that requires an odd mix of difficult to obtain ingredients for its clandestine manufacture. This means that the formulation and quality of the drug varies greatly, but it is most likely to contain methamphetamine (speed). It is one of the most dangerous drugs threatening young people today because of its harmful impurities and variable strengths.

What are the typical street slang names?

E, eggs, eckies, XTC, 'the love drug', Mitsubishi, MDMA, X, vitamin E, Adam, Eve, death, pills, Ex, pingers, EnC, eccy, disco biscuits, Roll, Clarity, Essence, Lover's speed.

It is one of the easiest drugs to obtain and has become very popular at social events, including parties and concerts frequented by both adults and youth. Ecstasy is usually taken in pill form and swallowed but it can also be injected.

What are the effects of ecstasy?

Ecstasy usually produces a euphoric rush within 20 minutes that can last up to 8 hours. Users may feel more alert, energetic and affectionate. There are usually three phases:

- Coming up: tightening of muscles especially the jaw, visual distortions, nausea and vomiting, strong pulse, confusion and panic.
- Plateauing: feelings of happiness, relaxation, confidence, alertness.
- Coming down: feeling physically exhausted, depressed, anxious, paranoid, irritable; insomnia.

The main effects can be summarised as 'loving feelings', anxiety, jaw clenching, teeth grinding, sweating, loss of appetite, nausea and vomiting, tremors, hallucinations, nervousness, bizarre overactive behaviour and insomnia. Medical effects include increased blood pressure, pulse and temperature, and dilated pupils.

A disturbing problem is the 'hangover' effect, where depression lasting for days follows the use of ecstasy.

What are the dangerous effects of ecstasy?

The serious adverse effects from overdosage include convulsions, seizures, liver damage, blood clotting and breathing problems. Death can result from a heart attack, cerebral haemorrhage (stroke), overheating (hyperthermia), fluid imbalance with low sodium (hyponatraemia) causing coma and kidney failure. A particular concern is the risk of the dangerous serotonin syndrome, in which excess

serotonin is released in the brain, especially if other drugs are taken with ecstasy. The risk is increased further in people with existing medical problems such as hypertension, heart disease, diabetes, epilepsy and mental illness.

What are the warning signals of overdose?

The symptoms or signs include feeling hot and unwell, confused and unable to talk properly, headache, lack of sweating, fainting or collapsing, muscle twitching, cramps, racing heart at rest, loss of control of body movements and problems urinating. Any person with these problems should seek immediate medical attention.

What are the long-term consequences of taking ecstasy?

The possible disturbing adverse effects include:

- cracked teeth from clenching and grinding
- high blood pressure
- decreased emotional control
- memory loss
- impaired attention and concentration
- sexual dysfunction
- severe depression
- damage to nerve cells
- apathy and lethargy.

The following effects on personal and family life include:

- relationship issues (e.g. arguments and break ups)
- work or study problems (e.g. trouble concentrating and reduced performance)
- problems with the law (e.g. being apprehended for possession and use, violence or crimes committed to support use)
- financial problems (e.g. debt from job loss or money spent on drugs).

Important things to remember about ecstasy

- It is a dangerous drug that can cause death from overdosage.
- It is classified as an illegal dangerous drug along with heroin and cocaine.
- Some antidepressant drugs should not be taken with it—ask your doctor.
- It should be avoided in pregnancy as it can damage the growing fetus.
- It should be avoided in people with chronic medical and psychological disorders.
- Ecstasy (the so called 'love drug') is not an aphrodisiac but can inhibit sexual performance.
- For help, contact your doctor or your state drug treatment service.

Epidermoid (sebaceous) cysts

What is an epidermoid cyst?

A cyst is a round sac that is filled with a fluid or semi-fluid (cheesy) substance. An epidermoid cyst is a small dome-shaped cyst or sac that develops from cells that normally occur in the uppermost layer of the skin (the epidermis). It is, and was also commonly called, a sebaceous cyst but the cyst is not actually derived from sebaceous glands in the skin. It is filled with a thick, greasy, cream-cheese like substance (resembling toothpaste) that slowly fills up the sac over many years. This substance will ooze out if the cyst is ruptured or squeezed vigorously.

What are the symptoms and signs?

The cyst looks like a smooth round dome shaped lump just beneath the skin. It is whitish or skin coloured. Cysts vary in size from 1 to 4 cm in diameter. They can occur singly or in groups. They are fixed to the skin and move with it. Sometimes a small, dark dot can be seen in the centre of the cyst (called the punctum)—this is an opening to the outside and it may grow a small thin keratin 'horn'.

They usually cause no symptoms and are usually painless. They may become red and painful if infected.

Who gets epidermoid cysts?

Epidermoid cysts are very common and can affect anyone. They can develop at any age and in either sex but are commonly seen in young and middle-aged adults.

Where in the body are they usually found?

Epidermoid cysts can occur in any area of hair-bearing skin, but mostly on the scalp. They are also found on the face, neck, torso (especially on the upper back) and scrotum.

What causes the cysts?

The theory is that some cells that are normally near the surface of the skin, particularly cells in hair follicles, get into deeper parts of the skin and continue to grow. This gradually forms a sac which produces keratin internally. This keratin becomes soggy and makes up the content of the sac.

What happens to the cysts?

Most people with small cysts that cause no problems are happy to live with them. The cysts may stay the same size and cause no problems. Sometimes they may grow to be large and embarrassing or become infected—these will require attention. Cysts in the scalp can be a nuisance, especially with combing, and people often want them removed.

Are epidermoid cysts harmful?

No, they are usually harmless. The main complication is infection by bacteria but this is easily dealt with.

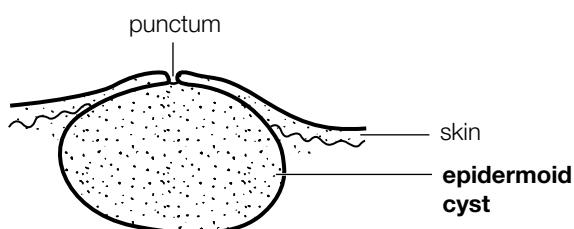
What is the treatment?

Doctors usually recommend leaving them alone if they are not a bother.

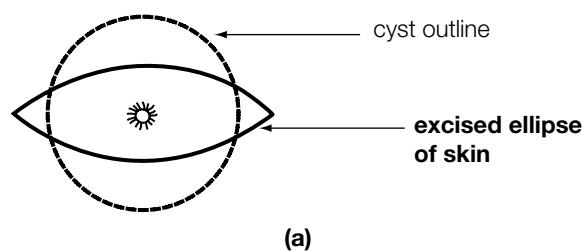
Reasons to remove a cyst can be:

- cosmetic: looks unsightly in a prominent position
- nuisance: being in the way and catching (e.g. when combing hair)
- infection: tends to be recurrent.

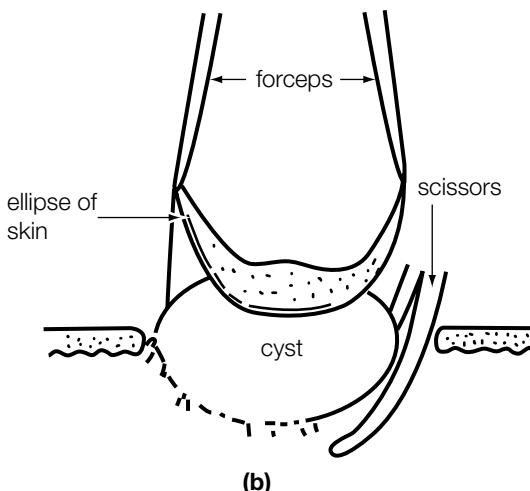
The cyst is usually removed by a simple operation done under local anaesthetic. A simple incision is made in the skin overlying the cyst (a), the sac is then dissected out (b) and the wound is closed with stitches.



Anatomy of the cyst



(a)



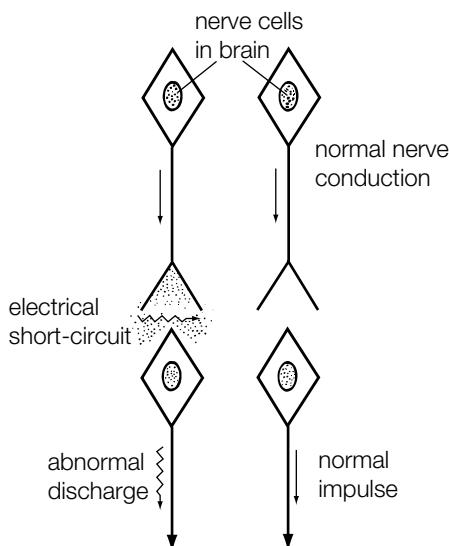
(b)

Removal of a large cyst

Epilepsy

What is epilepsy?

Epilepsy is a disorder in which a person is prone to having recurring seizures. It comes in various forms and shows up as a fault somewhere in the complex electrical circuits of the brain and nervous system. This minor fault results in the brain being unable to work properly for a brief period—the various symptoms depend on what part of the brain is affected.



In epilepsy there is a fault in the electrical discharge of the cells

What are the symptoms?

Some people will experience generalised seizures while others have partial (focal) seizures with very unusual sensations. Some children just stare for a brief period (absence seizures) or have sudden feelings of anxiety. Some people are conscious while others are unconscious during a seizure, depending on the type of seizure.

The convulsion

In this type of generalised seizure, patients suddenly become unconscious and fall to the ground. Their bodies go stiff, and then may twitch or jerk briefly. The tongue may be bitten and the bladder usually empties. They then may be drowsy or sleep for half an hour or so. Such a convulsion usually causes no problems.

Dos and don'ts for the onlooker

Don't:

- restrain or move the person (unless necessary for safety)
- force anything into the person's mouth
- try to stop the fit.

Do:

- roll the person on to his or her side with the head turned to one side and chin up
- move any sharp or hard object(s) away from the person
- call for medical help if the convulsion lasts longer than 10 minutes or starts again.

Note: The convulsion in itself will not cause death or brain damage.

What are the causes?

In most cases the cause is unknown and studies show that the brain appears normal in structure. However, epilepsy can be caused by damage from previous infections, scars from previous head injuries and, at times, tumours, excessive alcohol or drug use, or genetic factors.

How common is it?

Epilepsy is common and affects about 1 person in 100. Both sexes are equally susceptible, and it seems to run in some families. Famous people who have had epilepsy include Julius Caesar, Agatha Christie, Thomas Edison and Handel.

What is the outlook?

Epilepsy can now be controlled to varying degrees by the careful use of medicine. Most patients can achieve complete seizure control. Most people with epilepsy lead a normal life—they can expect to marry, have a normal sexual life and have normal children.

What about driving?

People with epilepsy have to be very careful about driving. However, most people with epilepsy can drive as long as seizures are well controlled. The usual rule is that they can drive if they have not had a convulsion for a period of 1 to 2 years. You will need to notify the road and traffic authority in your state if you have epilepsy.

What about employment?

People with epilepsy can hold down most jobs, but if liable to blackouts they should not work close to heavy machinery, in dangerous surroundings, at heights (such as climbing ladders) or near deep water. Careers are not available in some services, such as the police, military, aviation (e.g. pilot, traffic controller) or public transport (e.g. bus driver).

What about sport and leisure activities?

Most activities are fine, but people with epilepsy should avoid dangerous sports such as scuba diving, hang-gliding, parachuting, rock climbing, car racing and swimming alone, especially surfing.

What is the treatment?

It is important to have medical treatment to help lead a full and normal life. Tablets or capsules should be taken regularly. Regular check-ups are needed to watch for any side effects of the medicine (usually minor) and for blood tests to check medication levels. Quite often, once complete control has been established for several years, the medication can be gradually withdrawn and stopped.

Avoid trigger factors such as fatigue, physical exhaustion, stress, lack of sleep and excess alcohol. Take special care with open fires.

Fainting (syncope)

What is syncope?

Syncope (pronounced sin-co-p) is the medical term for fainting, which is sudden, temporary loss of consciousness (seconds to 3 minutes) due to insufficient oxygen reaching the brain. It is also referred to as a vasovagal faint or attack or 'passing out'.

In most instances there is a slowing of heart rate and pooling of blood in the legs at the expense of blood flow to the brain.

What are common symptoms and signs?

There may be warning feelings of dizziness or faintness.

- Quite sudden light-headedness
- General weakness, then falling (often in a slide) to the ground
- Fading hearing or blurred vision (sometimes)
- Nausea, hot and cold skin sensations (sometimes)
- Paleness and sweating
- Slow pulse
- There may sometimes be a short-lived twitching of the body with syncope which can be mistaken for a seizure or a fit
- Rapid return of full consciousness

The person invariably remembers the onset of the fainting spell.

If people are prone to syncope they should lie or sit down when they become aware of the above symptoms.

Note: If heartbeat or breathing is not present, this may be cardiac arrest rather than syncope.

What are the causes or trigger factors?

The cause is a sudden decrease in blood flow to the brain, which may result from:

- prolonged standing, especially in the heat (it can occur while sitting but not lying)
- sudden emotional stress (e.g. fear, fright)
- bleeding, including the sight of blood
- prolonged straining, such as from severe coughing (called 'cough syncope') or attempted bowel movements when constipated
- injections or the sight of a needle
- heart diseases that limit the amount of blood the heart pumps
- heartbeat abnormalities (too fast, too slow or irregular)
- getting out of bed or a chair suddenly (orthostatic hypotension)
- acute severe pain
- urination, especially in older men during the night (called micturition syncope)
- pressure on the neck (carotid sinus syncope).

Who gets syncope?

Syncope can occur for the first time at any age but is a feature of the young, such as seen in school assemblies and

choir boys. The lifetime risk is 50% for females and 25% for males.

What increases the risks of syncope?

- Stress
- Hot, humid weather or atmosphere
- Stuffy, poorly ventilated rooms
- Old age
- Prolonged standing (e.g. soldiers at attention)
- Menstruation, especially painful periods
- Social drugs, particularly alcohol
- Medications, especially anti-blood pressure drugs and those that slow the heart
- Diabetes

What is the expected outcome?

The common simple faint usually disappears in a few seconds or minutes with complete recovery.

Complications include injury such as concussion during falling (fortunately many people collapse slowly), and mistaking it for cardiac arrest or other serious disease and overtreating it. It is usual for your doctor to take an electrocardiogram of your heart (electrical tracing) followed by other tests if necessary.

What is the treatment?

- If the person faints and is breathing and has a normal pulse, leave them on the ground or floor with their head down and to one side and make them comfortable. Elevating both legs helps return blood to the heart.
- Leave the person in the lying position for about 10 minutes.
- If a person feels faint they should sit down immediately and bend over with their head between their legs or lie down.
- Resume normal activities as soon as possible.
- Medication is not necessary for fainting but may be necessary for underlying conditions such as an abnormal rhythm of the heart.

Prevention

- If you are prone to frequent fainting spells, avoid activities in which fainting may endanger your life, such as climbing to high places, driving vehicles or operating dangerous machinery.
- Avoid precipitating causes (e.g. prolonged standing in queues; long hot baths).
- Avoid sudden changes in physical activity.
- If feeling faint, sit down at the first opportunity and drink a cup full of water.
- If caused by social drugs or medication, consult your doctor. (Note: Any medication can cause fainting.)
- Avoid dehydration.

What is fatty liver?

Fatty liver refers to the abnormal build-up of fat in the liver cells. Fatty liver disease covers a range of conditions including simple fatty liver (called hepatic steatosis), which is common, and steatohepatitis, which is associated inflammation of the liver that may lead to the serious condition of cirrhosis (scarring of the liver).

What causes fatty liver?

Excessive intake of alcohol is a common cause but it is becoming increasingly common in people who are fat (overweight or obese). As type 2 diabetes becomes more common in our community so does the incidence of fatty liver. Causes can be summarised as follows:

The big three

- Alcohol excess
- Fatness (overweight and obesity)
- Diabetes

Others

- Crash diets
- Starvation and protein malnutrition
- High blood lipids
- Intestinal bypass surgery
- Drugs (e.g. tetracycline, cortisone, various hormones, amiodarone).

The combination of being overweight and drinking too much alcohol makes people very prone to developing a fatty liver. This also increases their risk of developing diabetes, which perpetuates the problem.

Contrary to popular opinion, fatty liver is not necessarily caused by eating too much fatty food.

How common is non-alcoholic fatty liver disease?

This modern epidemic facing the Western world is directly related to the global increase in obesity. It is the most common cause of abnormal liver function (as detected by routine blood tests) in the USA, UK and Australia. It is considered to affect 1 in 4 people in the USA.

How does fat get into the liver?

In normal conditions, fat from our diet is processed by the liver and any excess is stored in the body tissues. In some people, especially people who are overweight or obese, some of the excess fat accumulates in the liver.

What are the symptoms?

A person with a fatty liver is not necessarily ill. Usually there are no symptoms because the fat accumulates slowly. Some people complain of vague tiredness or a lack of energy. Your doctor may be able to feel an enlarged liver.

How is fatty liver diagnosed?

Blood tests of the liver may or may not show abnormalities but special tests, such as an ultrasound or CT scan, may show up fatty liver.

The only certain way to diagnose it is by a liver biopsy, which involves using a special needle to remove a small sample of liver tissue, which is then examined under a microscope. However, a biopsy is rarely needed.

What is the outlook?

Simple fatty liver usually causes no problems and rarely progresses to the serious problem of liver cirrhosis. Depending on the cause, a fatty liver may be helped if the patient stops drinking alcohol, loses weight and improves control of diabetes.

What about fatty liver in pregnancy?

This is a rare but very serious condition of unknown cause that develops close to term in the pregnant woman. It causes several uncomfortable symptoms including jaundice, nausea, vomiting, headache and abdominal pain. It has a high death rate and urgent delivery by caesarean section is required.

How is fatty liver treated?

There is no proven cure but it is important to treat causes, such as diabetes and obesity. Avoiding alcohol and drugs that may affect the liver is also important. The treatment of steatohepatitis is avoidance of alcohol and achieving ideal weight (if applicable). Talk to your doctor about this if you are concerned.

How can fatty liver be prevented?

Prevention is based on following a healthy lifestyle.

- Do not drink excessive amounts of alcohol—that is, a maximum of two standard drinks a day for men and women.
- Watch your diet—eat sensibly and avoid eating too much.
- Don't diet excessively—avoid long periods without food and include an adequate amount of protein in your diet.

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Fatty tumour (lipoma)

What is a fatty tumour (lipoma)?

A fatty tumour, also known as a lipoma, is as its name indicates a growth made up from fat cells that clump together. It is a common and harmless tumour of fat cells.

It grows under the skin in the subcutaneous tissue, which contains many fat cells. It is slow growing and may occur as a single lump or uncommonly in multiple numbers.

Where are lipomas usually located?

A lipoma can develop in any part of the body where there are fat cells. Lipomas are most common around the shoulders, arms, neck and trunk, such as the back and chest. They are also found on the upper thighs and lower back and even inside the body, particularly the abdomen.

Who usually gets lipomas?

They can occur at all ages from puberty to old age but are more common in middle age. They affect both sexes equally. They are very common, affecting at least 1 in 100 people. The development of lipomas tends to run in families and some individuals may have a tendency to develop several lipomas in different parts of the body.

What are the features of lipomas?

Lipomas are dome-shaped or egg-shaped lumps about 2 to 10 cm in diameter (some can even grow larger). The lumps are well defined. They feel soft and smooth and are easily moved under the skin with the fingers. Some people describe the feel as 'rubbery' or 'doughy'. The skin over the lump appears quite normal. Lipomas grow very slowly.

What are the symptoms of a lipoma?

Lipomas usually cause no symptoms or problems such as pain, itching or a feeling of pressure. The main concern to people is the cosmetic effect, as larger ones can look unsightly. In rare cases a lipoma may cause problems from pressure on a nearby body part such as a nerve.

What is the cause of lipomas?

The cause is unknown but the tendency to develop lipomas seems to be inherited and many patients have a family history of the tumours. Injury such as blunt blows to the body may trigger growth of a lipoma.

What usually happens to lipomas?

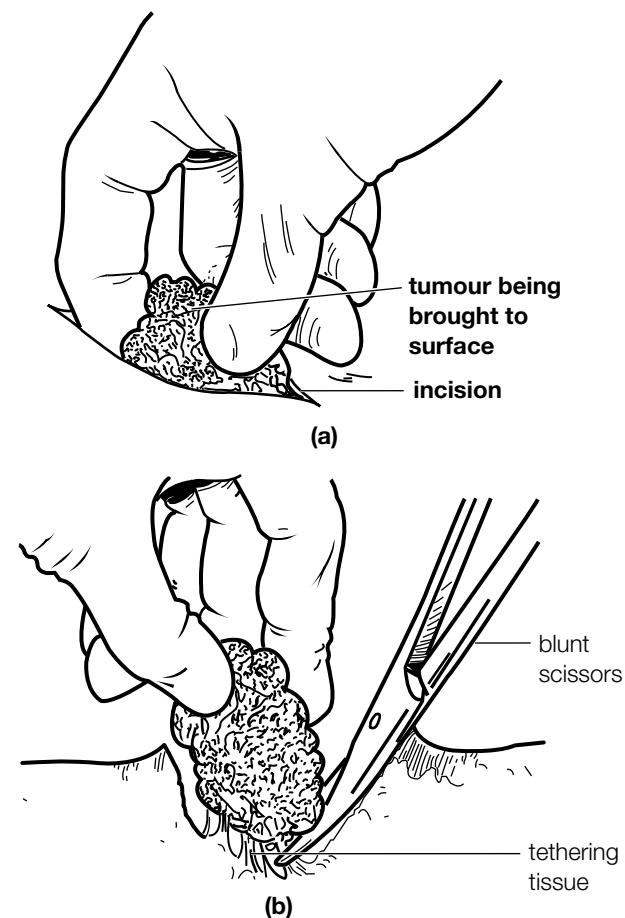
Some may continue to grow and become a nuisance but this is uncommon. Most remain relatively small and can be safely left for the duration of a person's life.

What is the risk?

There is no risk—as a general rule they do not become cancerous (malignant) but there have been rare exceptions. Exceptionally large lipomas may interfere with the function of adjacent muscles.

What is the treatment?

Most lipomas require no treatment, but some people choose to have them removed for cosmetic reasons. This is a simple procedure that involves making a surgical incision in the skin over the tumour (a) and shelling the tumour out (b). Local anaesthetic is used. The wound is then stitched up, leaving a small scar, unless you have a tendency to form thick keloid scars. The tumour may then be examined under the microscope. Some larger lipomas can be removed by the technique of liposuction. There is a tendency for recurrence after removal.



What is fever?

Fever is present when the temperature of the body (measured inside the mouth) rises above 37.5°C in the morning and above 37.8°C later in the day. The normal body temperature is up to 37°C. Most fevers are due to an infection in the body and are an important part of the body's defence against infection. A mild fever (up to 39°C) can in fact help the immune system to eliminate infection. Fever is usually caused by a virus but sometimes by bacteria. The chemicals produced by the body's immune system are responsible for the fever. The temperature returns to normal when the infection settles.

What are the symptoms of fever?

Symptoms include:

- feeling hot and sweaty
- feeling lethargic and unwell
- flushed face
- shivering or chills
- chattering teeth (extreme).

Fever in children

Fever is common in children, in whom the temperature may rise quickly to 38.5°C or higher. It does not mean the child has a serious illness. It is normal for children, especially infants and toddlers, to have at least 5 or 6 episodes of fever a year.

Note: Teething does not cause significant fever.

When is fever harmful?

Fever itself is not harmful until it reaches a level of 41.5°C. This level is very uncommon in children.

The most common complication is dehydration, so drinking lots of fluid is important.

Management of fever

Adults

- Rest as much as possible.
- Do not overheat with too many clothes or blankets.
- Drink a lot of light fluids, especially water.
- Take aspirin, ibuprofen or paracetamol tablets for relief.
- Avoid alcohol, tea and coffee (these can aggravate dehydration).
- Avoid cold baths or showers.
- Seek medical attention for the following:
 - severe headache or neck stiffness

- twitching, shaking or convulsions
- development of a rash
- excessive drowsiness or confusion
- signs or symptoms that worry you
- recent overseas travel.

Children

- Dress the child in light clothing.
- Do not overheat with too many clothes, rugs or blankets.
- Keep the child cool, but avoid draughts.
- Give the child small drinks of light fluids, especially water, often. Do not worry if the child will not eat.
- There is no need to give medical treatment to the child if the fever is mild and there are no other signs or symptoms. Otherwise, give paracetamol syrup every 4 hours, but only if the child is distressed with the fever and not for longer than 24 hours without further medical advice until the temperature settles. (Do not use aspirin under the age of 16 years.)
- Give the child plenty of tender loving care, with reassurance that they will soon feel well.

Note: Cooling measures such as completely undressing the child and using fans are not necessary and may be harmful.

Seek immediate medical help for the following (in children):

- severe headache or neck pain (with stiffness)
- light hurting the eyes
- repeated vomiting
- a convulsion, twitching or the child acting oddly
- undue drowsiness or difficulty waking up
- refusal to drink
- the child looks sicker
- the child develops a rash
- the child is floppy or pale
- no improvement in 48 hours
- earache or other pain
- temperature greater than 40°C
- breathing difficulty.

Key points

- Fevers fight infection.
- Fevers are common in children.
- Paracetamol or ibuprofen may be given to children up to 4-hourly for 24 hours.
- Keep them cool.
- Keep up fluids.

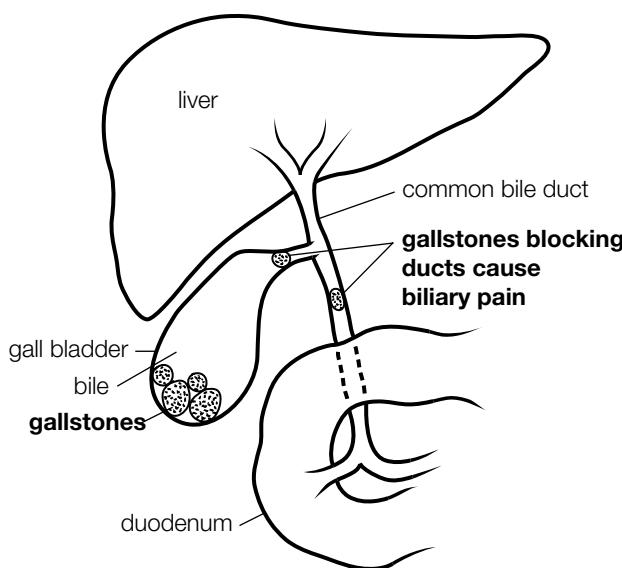
Gallstones

What are gallstones?

Gallstones are small, hard stones that develop in the gall bladder in a similar way to the growth of pearls inside oyster shells. They usually vary in size from that of a grape seed to the size of a marble.

How are they formed?

The gall bladder is a small bag about the size of a fig that collects bile—a green liquid produced by the liver that helps with digestion of fats in the gut. A small bit of sediment in the bile can act as a collecting spot for more sediment and cause it to gradually grow into a stone.



What are the symptoms?

About one-half of people with gallstones do not get any pain because the gallstones simply lie out of the way in the bottom of the gall bladder.

The rest suffer very severe pain, which builds up to a peak over a few hours and then fades. This biliary pain is usually felt in the upper abdomen on the right side just under the ribs. It can be felt in the back or middle of the abdomen. Nausea and vomiting often accompany the pain and these symptoms may be a clue that accompanying infection (cholecystitis) has developed.

What causes the pain?

The pain is caused by the gallstones getting jammed in the cystic duct or the common bile duct. This leads to raised pressure in

the hollow tube from the build-up of bile. The pain is relieved if the gallstone is pushed forwards into the duodenum or if it falls back into the gall bladder.

Who gets gallstones?

Almost anyone, including children, can grow gallstones. About 1 or 2 in every 10 adults in Western society has 1 or more gallstones. The problem increases with age, so that 1 in 3 elderly people have gallstones. It is related to a diet high in fats. There is an old medical saying that the typical patient suffering from gallstones is ‘female, fair, fat and forty’. This is a reasonably accurate picture.

What are the risks?

Gallstones are capable of causing unpleasant complications such as inflammation of the gall bladder and bile ducts, jaundice and acute pancreatitis (inflammation of the pancreas gland in the upper abdomen). Jaundice (yellowing of the skin and eyes) is caused by the stones remaining stuck in the common bile duct and stopping the flow of bile to the duodenum.

How are gallstones detected?

Gallstones can be detected by having an ultrasound examination, which is simple, safe and painless, or by a special X-ray called a cholecystogram.

What is the treatment?

Self-help

Diet is very important. Avoid overeating and eating fatty foods, or any foods that may bring on attacks of biliary pain. A sensible low-fat diet usually keeps the problem under control.

Medical help

Strong painkillers are needed to relieve the attacks. Sometimes the stones can be dissolved by a special chemical or shattered with special shock waves, but most troublesome gallstones need to be removed by surgery. This usually involves removing the gall bladder and its stones and, if necessary, removing stones from the bile duct. The usual modern-day operation is percutaneous cholecystectomy using a laparoscope. It is a type of ‘key-hole’ operation in which the gall bladder and stones are removed through the scope. Patients are usually able to leave hospital after 1 to 2 days.

If a gallstone is stuck in the bile duct, ERCP (endoscopic retrograde cholangio-pancreatography) or a similar procedure with magnetic resonance imaging (MRI) may need to be performed.

Gambling: problem gambling

What is problem gambling?

It is gambling activity that gives rise to harm to the individual player and to his or her family; such harm may also extend beyond the family into the community. It is a dependence disorder similar to that seen with alcohol and other drugs. It is a very common problem that affects about 2% of the adult population. Most people who gamble on a regular basis seem to control their gambling to set times and money limits. The most popular forms of gambling are lottery games and poker machines.

What are the early warning signs of problem gambling?

The key warning signs are:

- gambling more than \$100 a week
- chasing losses
- spending many hours gambling, staying longer than intended.

Other telltale signs are:

- placing larger, more frequent bets
- gambling until all the money on you has gone
- lying about behaviour
- being secretive
- promising to cut back but not doing it
- mood swings
- impulsive behaviour
- growing debts
- gambling at the expense of other pleasant social activities
- no longer enjoying gambling activities
- sleep problems thinking and worrying about gambling.

What are the dangers and risks?

- High suicide risk
- Major depression
- Stress-related problems
- Excessive alcohol intake
- High drug consumption
- Domestic violence
- Family breakdown
- Bankruptcy
- Work or study problems
- Problems with law-enforcement agencies over gambling/debts

How can problem gambling be managed?

It is a treatable condition and there are a variety of agencies that can offer support and counselling. However, like any other dependency such as alcohol, the cooperation of the dependent person is essential. Your general practitioner has a central role in management. Cognitive behaviour therapy is a very effective treatment for gambling. This involves a combination of systematic discussion and structured tasks to help you modify problematic thinking patterns and behaviours. The aim of treatment is either to control the gambling or quit altogether. There are specialist gambling counsellors who can help with more recalcitrant gambling problems. Support services are also available for families and friends.

Self-help

Simple tips to help you understand and control your gambling include:

- Seek support by talking it over with a friend, relative, spouse or religious leader.
- Keep a diary of your transactions, wins, losses, feelings, problems, ramifications at home and work.
- Find alternative interests and distractions that you enjoy (e.g. sport such as golf, bushwalking/prospecting, woodwork, craftwork for overseas causes; or get a dog—train it and walk it!).
- Limit your money, especially your cash withdrawals, TAB phone account, etc.
- Change your thinking including your understanding of chance and odds (e.g. for a \$2000 prize on the pokies you would have to feed about \$300 000 into the machine).
- Meditate about the issue and reflect on the effect your problem is having psychologically on your loved and dependent ones.
- Be honest with yourself and others. Reflect and admit that you have a problem and talk to someone you trust about it.
- Avoid the gambling venue and/or reduce the time spent there, including finding alternative interests (e.g. go to the movies weekly instead of to the gambling venue).

Finding help—who to contact

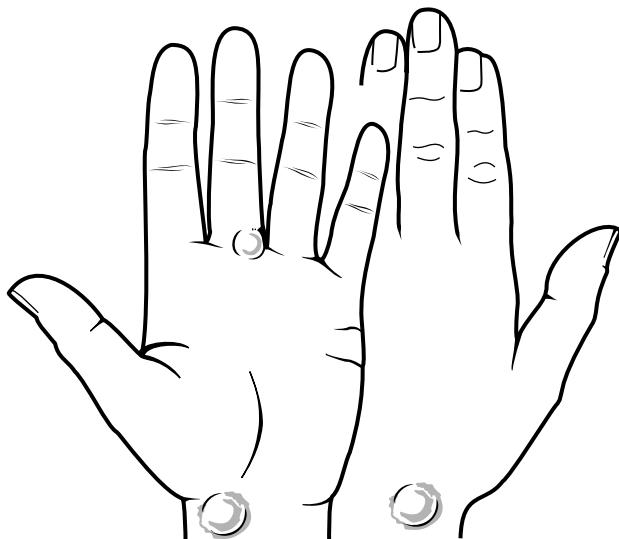
- Your general practitioner
- Gambler's help: telephone 1800 156 789 (24 hours)
- Gamblers Anonymous: www.gamblersanonymous.org.au
- The gambling support organisation in your state

Ganglion

What is a ganglion?

A ganglion is a firm, round swelling called a cyst that forms under the skin on the hand or foot.

It is filled with a clear, jelly-like substance. A ganglion is quite a common condition.



Usual locations of ganglions

Where are they located?

A ganglion is usually found either on the front or the back of the wrist, most commonly the back surface.

Other sites are the base of the fingers and the upper surface of the foot.

They lie over the tendons or joints at these sites.

What are the signs and symptoms?

The size of a ganglion can vary from about the size of a pea to as large as 6 cm, but the average size is about 1 cm.

Although the swelling is usually quite firm, it may be soft or hard to touch.

It is either painless or causes only a little discomfort. Those that develop at the base of a finger cause more discomfort, especially with repeated gripping movements.

What is the cause of a ganglion?

It appears that ganglions are often due to wear and tear in a joint or tendon covering, which then becomes inflamed.

A jelly-like substance builds up and balloons out as a round swelling.

It is often related to injury of the wrist or foot.

Who gets a ganglion?

Anyone can grow a ganglion, but it is seen more commonly in middle-aged women.

People engaged in occupations that involve continuous bending of the wrist, such as boilermakers and welders, are at risk.

What is the risk?

A ganglion is harmless, but like any inexplicable swelling, it should not be ignored but be checked by your doctor, who will make a firm diagnosis.

What is the treatment?

You can be reassured that a ganglion is a harmless swelling that can be safely left if it is not causing a problem.

The treatment options include:

- Leave the ganglion alone, as it may eventually disappear of its own accord.
- It can be burst by firm pressure such as squeezing, especially if it is 'ripe' (i.e. it has been present for several months and is reasonably large).
- An injection of a cortisone preparation into the middle of the cyst can make it disappear. If it is only partly successful, the injection can be repeated.
- It can be cut out by a surgeon. It is worth trying the simpler methods first.

What's the truth about the family Bible trick?

A much-quoted treatment is that of hitting the swelling with a heavy book such as the family Bible. This can be used with care and may work, but other, less dramatic pressure methods are worth trying first. The treatment is not usually advised.

Does a ganglion tend to come back?

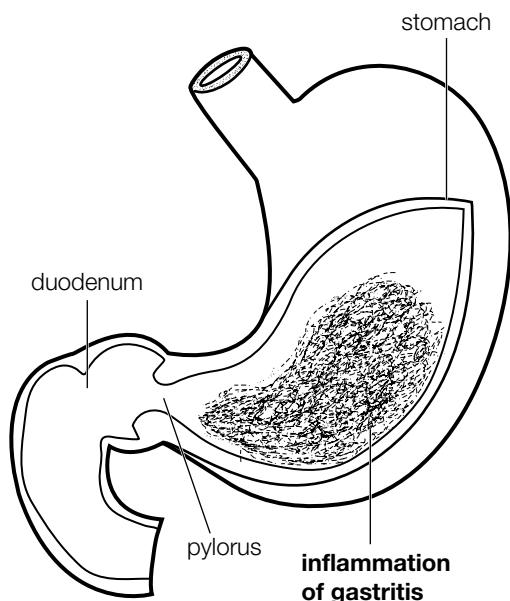
Yes, they can recur after the various treatments described above—even after surgery. However, most are fixed with the first treatment.

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Gastritis

What is gastritis?

Gastritis is inflammation of the mucous membrane lining the wall of the stomach. It is caused by various germs, especially viruses, irritating chemicals including various drugs, foods that 'disagree' or overeating. It may have an acute (sudden) onset and be short-lived, or be chronic with a slow onset and persistence.



What are the symptoms?

The symptoms of viral gastritis are similar to those of viral gastroenteritis, except that vomiting is more pronounced than diarrhoea. A common symptom is a burning discomfort felt in the upper abdomen and lower chest, similar to indigestion, especially if it is due to excessive alcohol or eating of the wrong foods. Other symptoms include nausea, anorexia (loss of appetite), belching and acid reflux.

What are the causes?

The inflammation is caused by infection of the stomach lining by viruses (mainly) or bacteria. Gastritis is also part of a group of disorders that cause erosion and gastric ulcers. The bacterium *Helicobacter pylori* has been shown to be an important cause of these disorders.

The following factors are associated with gastritis:

- aspirin and anti-inflammatory drugs
- alcohol
- smoking
- caffeine drinks
- overeating
- foods that don't digest easily
- extreme stress/overwork

- illness
- trauma (e.g. burns, severe injury).

How common is the problem?

Gastritis is very common and almost everyone has an occasional bout of gastritis. It is rare that epigastric discomfort, nausea and vomiting caused by gastritis alone last longer than 1 or 2 days. Such cases are suggestive of a viral cause. Symptoms may persist if you drink large amounts of alcohol and smoke.

What are the risks?

It is generally a mild illness and quick recovery follows. One complication is an erosion (ulceration) of the stomach wall that may result in vomiting blood. This rather alarming development requires urgent attention. If vomiting is profuse you have to be careful about getting dehydrated.

What is the treatment?

Treating the attack

- Avoid eating solid food during the first 24 hours.
- After 24 hours eat foods that agree with you.
- Take frequent amounts of non-alcoholic fluid such as water and milk.
- Avoid hot, fatty and spicy foods.
- Take an antacid preparation, preferably a liquid one.

Medical help

- For persisting discomfort your doctor may prescribe an anti-emetic (to stop vomiting) and a special type of antacid.
- If the problem persists or you have a complication such as bleeding or an ulcer, your doctor may organise a test for the bacterial germ *Helicobacter pylori* and a gastroscopy procedure to look directly into the stomach.
- Special treatment is available for *H. pylori* if it is present.

Prevention and self-help

Examine your lifestyle and whether you abuse your stomach through excessive drinking, improper eating especially 'fast' or irritating foods, smoking, fast living and stress. Commonsense living and moderation in all factors will help prevent attacks. Avoid taking excessive painkillers or taking aspirin and caffeine preparations.

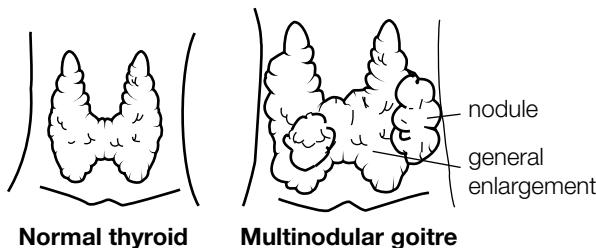
When to seek medical help

- Persistent symptoms
- Prolonged vomiting
- Very severe pain
- Signs of dehydration such as excessive thirst and scanty urination
- Vomiting blood or 'coffee grounds'-type vomitus
- Black or tarry bowel movements

Goitre (thyroid swelling)

What is a goitre?

A goitre is an enlarged thyroid gland and may include the whole gland, or just part of it. The thyroid gland, which makes thyroid hormones (thyroxine in particular), lies over the trachea (windpipe) in the lower part of the neck and is shaped rather like a butterfly. The enlargement can develop in any part of the gland.



A goitre is a swelling of the thyroid gland

What are the different types of goitre?

Diffuse smooth goitre

In this type of goitre, the whole thyroid gland is enlarged or swollen so that it feels larger than normal and smooth. Examples of some of the common causes are:

- **Grave's disease**—an autoimmune disorder that causes the gland to swell and produce excessive thyroxine
- **Iodine deficiency**—a shortage of iodine in the diet that causes the thyroid to swell as it strives to make sufficient good-quality thyroxine. Goitre is common, especially in areas where the soil has little iodine
- **Thyroiditis**—a general inflammation of the thyroid, that can be caused by a virus
- **Hereditary tendency**—this tends to run in some families

Nodular goitre

A small lump that develops in the thyroid is called a thyroid nodule. Types are:

- a single nodule, which includes:
 - an adenoma (a solid benign tumour)
 - a cyst (a fluid-filled benign tumour)
 - a cancerous tumour

- a multinodular goitre, where there are many lumps (nodules) in the thyroid gland.

We often do not know the cause of most of these nodules.

What are the symptoms of goitre?

- The main feature of goitre is the appearance of a swelling or lump that can vary in size from being very small and hardly noticeable to extremely large. In most cases, there are no symptoms.
- A large goitre, especially if it grows inwards, may press on the larynx causing hoarseness, on the windpipe causing breathing difficulty, or on the oesophagus (gullet) causing difficulty with swallowing.
- Most goitres are painless but if inflamed, as in thyroiditis, can cause neck tenderness and pain.
- A goitre may be responsible for making too much thyroxine, causing hyperthyroidism, or too little, leading to hypothyroidism, with associated symptoms of these disorders.

What are the investigations?

- Thyroid function tests to determine if the thyroid is overactive, underactive or normal (called euthyroid)
- An ultrasound scan of the thyroid, especially if a nodule is present
- A needle biopsy of a small piece of tissue from the goitre
- A radioactive iodine scan
- A chest X-ray if extension from the neck downwards to the chest is suspected

What is the treatment?

This depends on the size of the goitre, its cause and the presence of symptoms. If the goitre is small and not due to a cancerous nodule and is also euthyroid (functioning normally), treatment may not be required.

In some cases, an operation may be required to remove some or all of the goitre. This is important for cancer, where the outlook is usually very good. If the goitre is due to lack of iodine in the diet, iodine replacement will be given. Iodine is found in fish, fish products, sea salt and iodised salt. Other treatments include medication for abnormal thyroxine levels and radioactive iodine for an overactive thyroid.

Haemochromatosis

What is haemochromatosis?

Haemochromatosis is a common inherited condition where too much iron accumulates in the tissues of the body. Iron is an important element, especially for the quality of our blood, but excess is harmful. The normal levels of iron in the body are about 3 grams in women and 4 grams in men. In haemochromatosis, the level rises to over 20 grams.

What is the cause?

Haemochromatosis is one of the causes of 'iron overload', a condition in which too much iron accumulates in the body and causes damage to organs and tissues of the body. Haemochromatosis is a hereditary disorder, in which faulty genes on the chromosomes of a person with the condition cause the body to absorb too much iron from the gut and thus overload the tissues and organs of the body with iron. Iron overload can be caused by other things than haemochromatosis; for example too much iron in the diet from iron tablets, repeated blood transfusions, and thalassaemia. Some people refer to these other causes of iron overload as 'secondary' haemochromatosis.

Who gets haemochromatosis?

Haemochromatosis can affect anybody and affects both men and women. It is mainly a problem affecting Anglo-Saxons and usually only affects people from middle age onwards. About 1 in 8 people carry a single gene related to the disorder—these people are referred to as heterozygous, or carriers, and do not have the disorder. However, about 1 in 200 people are homozygous; that is, they have double genes. These people can have the disorder to a variable extent—some go throughout life without being aware they have a problem, while others can have serious symptoms.

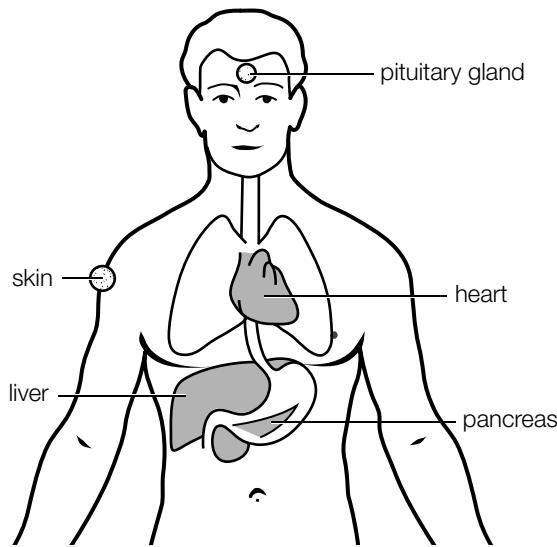
In a city the size of Sydney there would be about 15 000 people affected by the disorder, while about 400 000 would be carrying only one haemochromatosis gene (the most common of these being the HFE gene).

What are the symptoms?

The most common symptom is tiredness or fatigue, which can be extreme. This is due to the overload of iron. Other symptoms may include painful joints, upper stomach discomfort, loss of sex drive or the symptoms of diabetes such as excessive thirst and passing excessive urine. Most patients do not develop their first symptoms until aged between 30 and 60 years. However, some homozygous people may show no or only mild symptoms. The skin may become discoloured, giving a bronzed or leaden grey appearance.

What are the risks?

If the condition is not diagnosed early, the overload of iron can accumulate in organs, particularly the liver (causing cirrhosis), the pancreas (leading to diabetes), the heart (causing heart dysfunction) and the pituitary gland (leading to loss of libido and impotence). Some of these problems are life threatening, hence the importance of early diagnosis. Those with abnormal liver tests may require a liver biopsy.



Organs of the body affected by too much iron

What tests can be done?

There are basically two types of blood tests:

- iron levels, especially transferrin saturation (which measures total iron stores in the body)
- chromosome tests—the HFE gene and other genes.

The genetic test informs us who are normal, homozygous (have the disorder) or heterozygous (carriers).

Who should be screened?

First-degree relatives of people with known haemochromatosis should be screened with iron studies of the blood. Genetic screening is now available to them (covered by Medicare) and is helpful in genetic counselling, as it gives information about who are carriers or who are completely free of the affected genes; this can be most reassuring for members of affected families.

What is the treatment?

The treatment is known as venesection and is a similar procedure to donating blood. For those affected with high iron levels, about half a litre of blood (which contains iron) is removed weekly until the blood iron level is normal. This may take about 2 years in some people. Then the blood is taken every 3 to 4 months for the rest of their life to maintain a normal iron level.

Patients can have a normal diet but should limit iron-rich foods, such as red meat, and alcohol intake. Vitamin C supplements can increase iron absorption and should be avoided. Carriers require no treatment.

What is the life expectancy?

This is normal if diagnosed and treated before complications such as cirrhosis of the liver or diabetes develop.

Haemorrhoids

What are haemorrhoids (piles)?

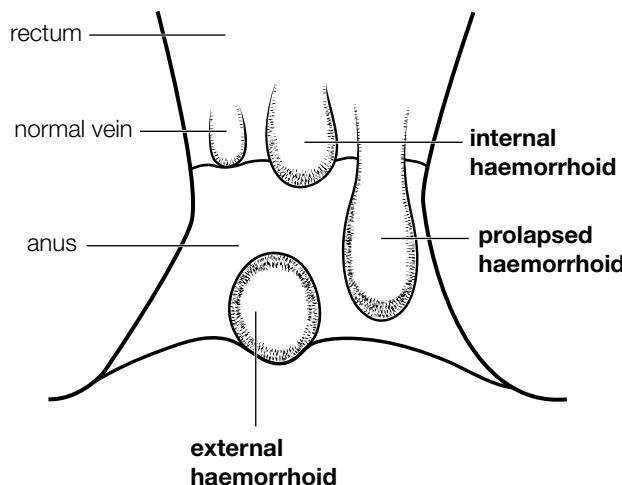
Haemorrhoids are knobbly varicose veins of the rectal or anal area, which can prolapse outside the anus and hang as small grape-like lumps.

What are the different kinds of haemorrhoids?

Internal haemorrhoids are those that form inside the rectum near the beginning of the anus. They are generally not painful and often are only noticed when they bleed.

Prolapsed haemorrhoids are internal haemorrhoids that protrude through the anus when the stool is passed or when a person stands or walks. They are usually painful.

External haemorrhoids are small, painful haemorrhages under the skin around the anus. They form a hard clot after 24 hours. Their proper medical name is *perianal haematoma*. When they settle, they sometimes leave a small skin tag.



What causes haemorrhoids?

The most common cause is constipation, mainly due to excessive straining at the toilet because of hard faeces. Some experts say that sitting on the toilet for long periods of time causes haemorrhoids, but this problem is related to constipation.

It is important to get into the habit of answering the 'call of nature'. The problem tends to run in families. Other associations are heavy manual work, sitting for long periods (such as bus driving) and pregnancy.

How common is the problem?

Haemorrhoids are common and tend to develop between the ages of 20 and 50. About 1 out of 4 Westerners suffer from them at some stage of life.

What are the symptoms?

Bleeding is the main and, in many people, the only symptom. The word *haemorrhoid* means 'flow of blood'. The blood is bright red and appears when you defecate. You may notice it as streaks on toilet paper or in the faeces.

Piles often cause a mucus discharge and itching around the anus. Any consequent scratching makes the irritation worse.

What are the risks?

Haemorrhoids are not dangerous, but continuous bleeding may result in anaemia. Any bleeding from the anus, especially in someone over the age of 40, should be reported to your doctor. Occasionally the bleeding attributed to haemorrhoids can come from cancer of the bowel.

What is the treatment?

The best treatment is prevention, and softish bulky faeces that pass easily prevent haemorrhoids. Train yourself to have a diet with adequate fibre by eating plenty of fresh fruit, vegetables, and wholegrain cereals or bran.

Try to complete your bowel action within a few minutes and avoid using laxatives.

If you have haemorrhoids, clean yourself thoroughly but gently after each bowel action (using soft toilet paper and soapy water) and dry yourself carefully.

Special astringent ointments or suppositories (advised by your doctor) may relieve the congestion and shrink the haemorrhoids. Mild cases may clear up completely.

If the problem persists, your doctor may advise injections or minor surgery. Occasionally surgery to remove the piles—called *haemorrhoidectomy*—may be the only answer.

Halitosis

What is halitosis?

Halitosis is unpleasant-smelling or 'bad' breath. It is common in healthy people, especially in the morning when they first awaken from sleep.

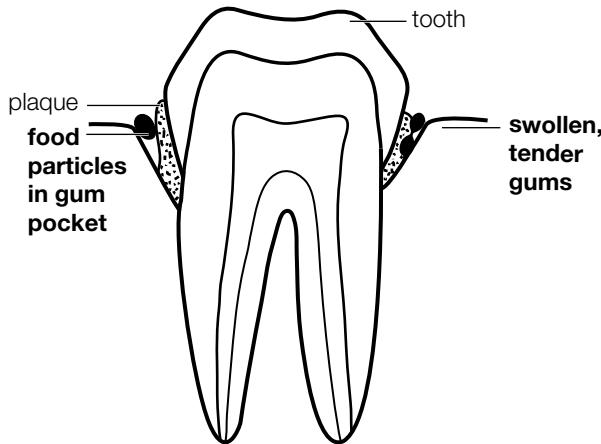
What are the causes?

Dental problems

Halitosis is mainly caused by dental problems, usually tooth decay or plaque and food trapped in the gaps between the teeth. The bits of food undergo decay by sulfur-producing bacteria, just like food left to rot, and this process causes an unpleasant smell. This problem can also occur in dentures when food particles stick to them.

Another common dental problem is inflammation of the gums (gingivitis), which is usually caused by dental plaque at the base of the teeth as we get older. The gums tend to be sore and bleed on brushing.

Plaque and gingivitis often appear together, and both contribute to halitosis.



Gases from the stomach

Another cause is gases and smells coming from the stomach due to the breakdown of some foods. Certain people seem to be prone to this problem. It is worse when fasting. Foods that tend to cause problems are onions, garlic, peppers, alcohol, spicy salami and similar meats.

Medical causes

Medical disorders that cause halitosis include:

- tonsillitis
- chronic nose and sinus infections
- lung disorders (e.g. TB and bronchiectasis)
- cancer
- general infections with fever (e.g. glandular fever)

- diabetes
- liver disease
- kidney disease
- drugs, including smoking.

Other causes

- Anxiety and stress
- Habitual mouth breathing, which dries saliva in the mouth and causes a dry mouth
- Sulfur compounds produced by bacteria from the back of the tongue (considered by some experts to be the main cause of halitosis)

What are the effects?

It is not a serious problem, but it can seriously affect the personal and social life of sufferers, including their self-esteem.

How is it managed?

Dental and mouth care

The most important thing is to clean the teeth and mouth regularly, especially with a toothbrush and dental floss. To get rid of plaque and tiny food particles it is important to:

- Brush the teeth regularly during the day, immediately after each meal if possible.
- Rinse the mouth out with water after meals.
- Use dental floss each day to clean the teeth.
- Gargle with an antiseptic mouthwash (e.g. Listerine, Cepacol).
- Gently brush the back of the tongue with a soft toothbrush.

Nutrition

- Ensure you have at least 3 healthy meals a day. Regular eating helps.
- Avoid foods such as onions, garlic, peppers and spicy salami.
- Avoid strong cheeses.
- Avoid excessive alcohol (maximum 2 standard drinks a day for men and women).
- Chewing fresh parsley, especially after eating onions and garlic, is helpful.

Lifestyle

- Avoid fasting for long periods during the day.
- Avoid smoking.
- Avoid excessive coffee (maximum 3 cups a day).

Special tip

A proven method is to gargle an oil and water mixture. Make up a mixture with equal volumes of aqueous Cepacol and olive oil. Gargle a well-shaken mixture and expel, 4 times a day.

What is a hangover?

A hangover is the extreme drained and uncomfortable feeling the morning after a bout of excessive drinking of alcohol. It is a type of acute drug toxicity. The main symptoms are headache, nausea and fatigue.

What is the cause of the sickness?

There are several factors involved in leading to the toxic effects of alcohol on the brain and the rest of the body, and particularly to the state of dehydration, which is a key feature. How bad you feel after an evening's drinking depends partly on your basic constitution, your conditioning to drinking and also on what and how much you have drunk. Most alcoholic drinks contain substances called congeners that combine with the amount and strength of the alcohol to give a drinking bout its hangover effect. Because alcohol is a diuretic drug it causes an increased output of urine thus leading to dehydration of the body.

What are the most potent drinks?

Brandy, bourbon and red wine produce the most hangovers. Gin and vodka contain few congeners and are the least likely to cause hangover. Champagne or sparkling chardonnay is also a potent drink particularly on an empty stomach. Any fizzy drink is not advisable during a solid drinking session because the gas increases the rate of absorption of alcohol.

What other factors contribute to hangovers?

- Smoking—an important contributing factor
- Drinking on an empty stomach or with little food
- Fast drinking, especially 'sculling'

What are the risks?

Next-day performance can be a problem and dangerous in people with responsible jobs requiring alertness and fine skills, such as transport drivers and pilots. Making a habit of partying with hangovers can lead to chronic alcohol dependence and toxicity.

What are some of the myths of alcohol folklore?

There are several traditional beliefs associated with drinking but their validity is questionable.

- It is risky to mix your drinks: for example to have beer after champagne, whisky or wine after gin, or red wine after white wine. Although mixing may contribute to hangover

there is no evidence that it is harmful. It is best to mix water with alcoholic drinks, for example mineral water to follow or precede alcohol.

- A hair of the dog that bit you eases the hangover: that is, try to alleviate a hangover by having a drink or two the following morning. This may help you feel better due to taking fluid and reversing the withdrawal symptoms but it is a dangerous practice if used regularly. It can be a forerunner of alcohol dependence.
- Drinking coffee sobers you up: This may be partly true but coffee also has a diuretic effect and leads to loss of fluid.

How can hangovers be prevented or minimised?

Much of this advice is common sense and you can set your own strategies.

- Drink alcohol on a full stomach—combine it with food of any kind. This is probably the best single thing you can do besides drinking less to reduce the severity of a hangover.
- Select alcoholic drinks that suit you. Avoid drinking excessive champagne on an empty stomach when you arrive at a function.
- Avoid fast drinking—keep it slow, choose your drinks for their flavour not their 'kick' and enjoy the taste of each relaxing sip.
- Restrict the quantity of alcohol you drink—set yourself reasonable limits and stick to them.
- Dilute your drinks—adding non-alcoholic liquid mixtures to strong drinks is effective. Look for the tall container of soda water, water or tonic. Mix your drinks by having a glass of water or non-alcoholic juice between drinks or making it the 'just one more drink'.
- Beer drinkers should use 'light' beer.
- Avoid or limit smoking while you drink.
- Drink 3 large glasses of water before retiring.
- For headache, take 2 tablets of paracetamol before retiring.

What is the treatment?

- Avoid overexertion.
- Drink plenty of fluids, preferably water (most important).
- Drink sweetened orange juice or tomato juice: such fruit juices help eliminate alcohol.
- A drink of honey in lemon juice helps.
- Avoid caffeinated drinks and more alcohol.
- Have a substantial meal but avoid fatty, greasy food.
- Try vegemite or honey with toast.
- Eat a banana (high in potassium).
- Take 2 paracetamol tablets for discomfort, especially for headache.

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Hay fever

What is hay fever?

Hay fever (also known as allergic rhinitis) is an allergic reaction of the nose, throat and eyes to irritating particles in the air. It is similar to asthma, except that the oversensitive (allergic) reaction occurs in the upper respiratory tract instead of the lungs.

There are two types of allergic rhinitis:

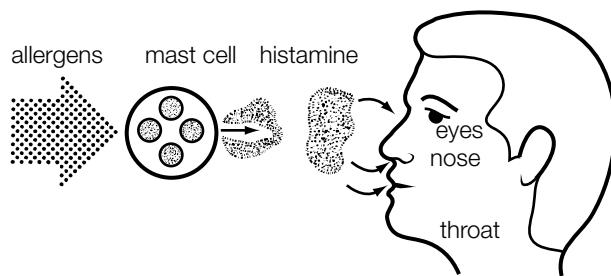
- seasonal rhinitis, which occurs only during certain seasons, usually spring as an allergy to grass pollens
- perennial rhinitis, which is present throughout the year and tends to be triggered by dust mites, mould and animal dander.

What are the symptoms?

Symptoms are sneezing, running and itching nose, itching dry throat and itching eyes. Sufferers usually feel generally listless and irritable and may find it difficult to concentrate.

What is the cause?

The airborne irritants, also known as allergens, enter the nose, throat and eyes and cause sensitive cells (mast cells) to become active (rather like a dormant volcano erupting). These cells release a substance called histamine, which causes the symptoms.



What are the allergens?

The allergens are either foreign proteins (tiny invisible particles from plants and animals) or chemicals. They include:

- pollens from trees (in spring) and grass (in summer)
- house dust mites (cause perennial rhinitis)
- mould
- hair, fur or feathers (from cats, dogs, horses or birds)
- some foods (such as milk, eggs, peanuts and peanut butter).

Many people do not know what they are allergic to.

Do any other things aggravate hay fever?

Chemicals such as smoke, paints and sprays, cosmetics and aspirin can make hay fever worse. Emotional upset, fatigue, alcohol, chilly damp weather and airconditioning can aggravate it also.

Is it inherited?

It does tend to be hereditary. Children whose parents are allergic have an increased chance of getting hay fever.

It is a common disorder, and people can grow into it and out of it at any age.

What are the risks?

Hay fever is not a serious disease but, if not treated, it can lead to asthma, nasal polyps and hearing problems.

Can hay fever be cured?

No, but modern treatment can control the problems and relieve the symptoms. People do not have to suffer with it and should contact their doctor if it is troublesome. Hay fever can be so mild that some people do not realise they have it, and some people seem to grow out of it.

What is the treatment?

Self-help

Keep healthy, eat a well-balanced diet, avoid 'junk food' and live sensibly, with balanced exercise, rest and recreation. If your eyes give you problems, try not to rub them, avoid contact lenses and wear sunglasses.

Avoid using over-the-counter decongestant nose drops and sprays: although they soothe at first, a worse effect occurs on the rebound.

Avoidance therapy

Avoid the allergen, if you know what it is. (Consider pets, feather pillows and eiderdowns.)

If due to pollens in spring:

- stay indoors as much as possible, especially if windy
- check the pollen count in the media—if very high, stay indoors as much as possible
- splash your eyes often with cold water
- smear Vaseline inside your nose to reduce the effect of pollen.

Sources of the house dust mite are bedding, upholstered furniture, fluffy toys and carpets. Seek advice about keeping your bedroom or home dust-free, especially if you have perennial rhinitis.

Pets, especially cats, should be kept outside.

Avoid chemical irritants such as aspirin, smoke, cosmetics, paints and sprays.

Medical help

Your doctor has many treatments available, ranging from antihistamine pills to desensitisation (after skin testing reveals your allergens). The newer antihistamine pills do not cause as much drowsiness as did the older ones. Sprays for the nose and drops for the eyes (which may include corticosteroids or sodium cromoglycate) are available by prescription and are very effective.

Head injury

What happens?

The patient has sustained a head injury that appears to be mild. He or she has been taken to a doctor's surgery or hospital, observed and is showing no serious signs of damage, so can go home and expect that rapid recovery will follow. However, very rarely, complications may follow at any time over the next few days.

What causes complications?

The brain, which has the consistency of jelly, is housed very compactly in a rigid case—the skull—and cannot tolerate any increase in pressure. If this occurs due to bleeding or swelling, pressure is exerted on the base of the brain, which contains the vital centres controlling such functions as breathing and heart action.

The problem may occur gradually, and certain warning signs will develop that indicate the pressure will have to be relieved.

What is concussion?

Concussion is the typical head injury that involves a temporary disturbance of function of the brain. The effect can vary from mild giddiness or headache to loss of consciousness. There may or may not be a brief period of unconsciousness. The other symptoms, according to the severity of the blow to the head, can include being stunned or dazed, senselessness, headache (may be the only symptom), amnesia (loss of memory), fatigue, dizziness, blurred vision, nausea, vomiting, irritability, unsteady walking and mental lapses including loss of memory.

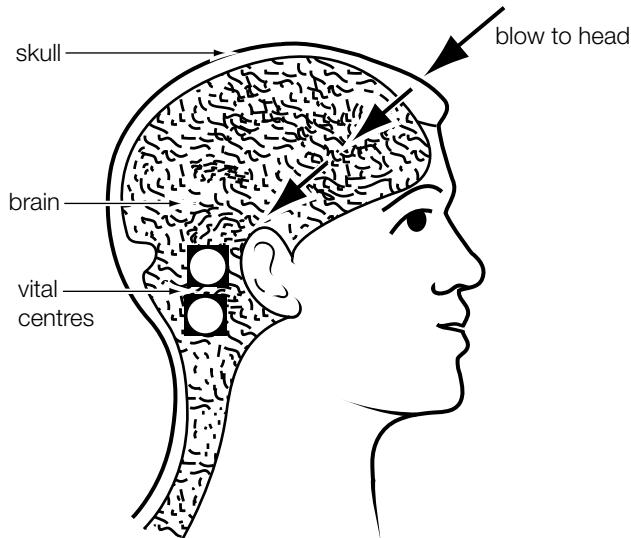
The usual outcome is excellent with recovery in an hour or so, but occasionally some people may take a few days to return to normal.

Note: There is no such thing as 'delayed concussion'. There can be a 'post-concussion syndrome' with persistent headache and dizziness. It requires investigation.

What should you do?

Someone in the household should keep the patient under close observation over the next 24 hours (at least) and bring him or her back to the surgery or to the casualty department of the nearest hospital immediately if they notice any of the following features:

- unconsciousness or undue drowsiness, such as difficulty waking up
- confused, irrational or delirious behaviour
- headache that continues
- bleeding or discharge from the ear or nose
- repeated vomiting
- fits or spasms of the limbs or face
- blurred or double vision.



In children

Children should be allowed to go to sleep, but should be woken every 4 hours to see if they are rousable and conscious.

Other points

Diet

Any food and drink can be taken in moderation after the first 4 hours, but avoid alcohol for at least 24 hours.

Painkillers

Paracetamol can be taken in the usual doses for headache. Avoid taking aspirin.

Drugs

Avoid sedatives; take no medication unless instructed.

Ice packs and cold compresses

Ice packs and/or cold compresses can be used over swollen or painful areas of the head.

Rest

- Stay resting in bed for 2 days, with the head and shoulders slightly elevated.
- When you start getting up, return to bed if you feel giddy or get a headache.
- Rest quietly at home and do not drive or return to work or your normal activities until after 7 days. Discuss this with your doctor.

Heart failure

What is heart failure?

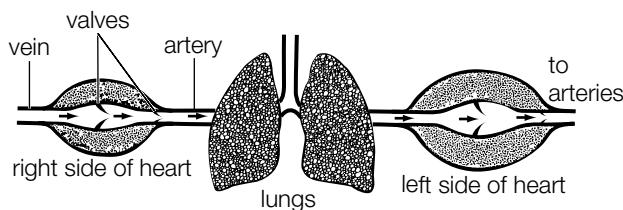
Heart or cardiac failure occurs when the heart, which is a muscular pump, fails to pump enough blood around the body. The heart becomes inefficient, either because the muscle is weakened or because there is a mechanical fault in the valves controlling the flow of blood.

The mechanics of the heart

The heart is basically a series of two pumps, with the smaller right side pumping blood (returning to the heart) to the lungs to get oxygen. The left side of the heart has the big job of pumping blood rich in oxygen around the body. Heart failure may affect only one side of the heart but more usually affects both sides, in which case it is called *congestive cardiac failure*.

In left-sided failure, the lungs become congested with fluid (like a heavy sponge), causing breathlessness; in right-sided failure, the blood pools in the veins, causing swelling in the tissues, especially of the legs and abdomen.

The heart function is assessed best by a procedure called an echocardiogram. Other tests include blood tests, exercise or stress ECG, and angiography.



The mechanics of the heart and circulation

What are the symptoms?

The main symptom is breathlessness, usually during activity and after exertion. Other symptoms are tiredness, lethargy, muscular fatigue, unexplained coughing and wheezing, nausea and swelling of the ankles and abdomen.

What causes it?

Previous heart attacks leading to scarring, coronary artery blockage, high blood pressure, faulty heart valves and alcohol abuse are the main causes.

Other risk factors include diabetes, smoking, physical inactivity and a diet high in saturated fats and cholesterol.

What are the risks?

Despite its name, heart failure is not usually an immediately life-threatening disease; it generally responds to treatment and can be held in check for a long time. If untreated, it puts a great strain on all the body, which tends to become waterlogged. If treated successfully, the main danger comes from the underlying cause such as coronary artery disease or alcohol abuse.

What is the treatment?

Self-help

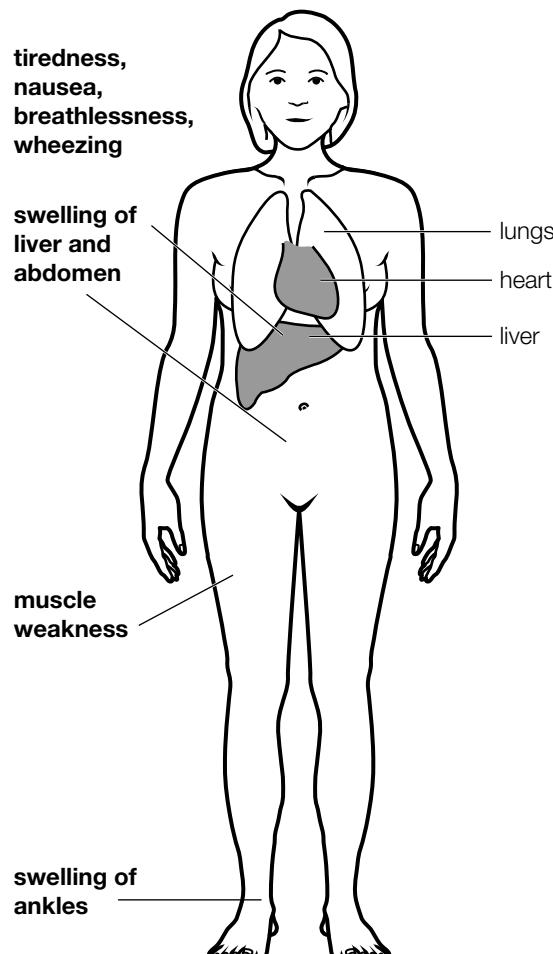
- Reduce your physical activity: rest if your symptoms are severe but take regular gentle exercise such as walking if your symptoms are mild or absent.
- Cut down your salt intake: have a salt-free diet.
- Limit your fluid intake to less than 1½ litres a day.
- Reduce your weight if you are overweight.
- Avoid smoking.
- Take no alcohol or small quantities only.
- Limit caffeine drinks to 1 to 2 cups a day.

Medication

The most commonly used medicines are vasodilators (ACE inhibitors)—the key drugs—to open up the blood vessels, and fluid tablets (diuretics), both of which reduce blood pressure. This helps take the load off the heart. A drug called digoxin may be used to improve the strength of the heart and beta-blockers to slow the heart. Your doctor will advise you about other drugs.

Surgery

Surgery to replace narrowed or leaking valves, coronary bypass surgery or heart transplant surgery may be considered.



Symptoms of right-sided heart failure

What is heartburn?

Heartburn is not a disease but a symptom of burning discomfort in your chest, usually associated with an acid taste in the mouth. It is also referred to as indigestion or dyspepsia and is associated with drinking and eating.

What causes heartburn?

It is usually caused by reflux of the acid contents of the stomach back up the oesophagus (gullet) and sometimes into the throat. It may be caused by a peptic ulcer. Reflux occurs because the valve made by a ring of muscle at the junction of the oesophagus and stomach does not close fully, and may be associated with a hiatus hernia.

Factors that bring it on are:

- particular foods (e.g. cabbage, onions, cucumber, curries, pastries—especially pies, pasties, fruit cake)
- certain drinks (e.g. wine—especially red wine, beer, carbonated drinks, coffee)
- eating too fast
- rich or big meals
- chewing gum long and hard
- stress and anxiety
- pregnancy
- old age
- certain drugs (e.g. antirheumatism drugs, aspirin)
- obesity (a common factor).

What tests are done?

Tests may not be necessary, but if it persists or your doctor is concerned about an ulcer, X-rays may be taken or a tube called a *gastroscope* may be passed down into the stomach to inspect it.

How can it be prevented?

Don't:

- bolt your food down
- eat standing up
- smoke
- eat fatty foods (e.g. pastries)
- eat spicy foods
- eat large or rich meals
- bend over for work
- strain at the toilet
- drink wine with meal
- eat foods that 'burn'
- drink coffee or alcohol late at night.

Do:

- eat in a slow and relaxed manner
- eat sitting down and relaxed
- avoid foods that 'burn'
- eat small or moderate meals
- squat rather than bend
- keep your bowels regular
- avoid stress: relax!
- relax for half an hour after a meal
- reduce your alcohol intake
- eat at least 1 hour before going to bed.

What is the treatment?

- Attend to the above preventive advice.
- Learn what brings on your heartburn and avoid it.
- Take antacids when you feel heartburn coming on and before bed at night.
- Make sure that you get to your ideal weight, should you be overweight.
- If your symptoms are not relieved by these measures, see your doctor, as further investigations and treatment may be necessary. Your doctor may prescribe other medicine to reduce the level of acid in your stomach.

What is heroin?

Heroin, also known as diacetylmorphine, is one of a group of drugs known as opioids. Other opioids include opium, morphine, pethidine, codeine, oxycodone and methadone. The basic natural opioid is opium, which is extracted from the opium poppy grown in many parts of the world.

The common medical painkillers, morphine and codeine, are processed from opium and the strongest of all opioids, heroin, is manufactured from these drugs by a special chemical process. It is used in medicine as a very effective potent pain killer but its use is now restricted. Like all opioids, it is a depressant drug that slows down the activity of the central nervous system, including breathing, which is a very serious adverse side effect. The illicit use can be by injection of dissolved powder and inhalation of powder.

What are the effects of heroin?

The effects vary from person to person and depend on the size and health of the person and whether other drugs such as alcohol are being taken. Heroin produces a rush of pleasure within minutes of taking it, leading to a feeling of warmth and serenity. Any feelings of pain are relieved.

Other symptoms and signs include:

- drowsiness and lethargy
- nausea and vomiting
- confusion
- watery eyes
- dry mouth
- constipation
- reduced sexual urges
- slow or slurred speech
- constricted pupils of eye
- slowing of breathing

What are typical street (slang) names of heroin?

H, Big H, Big Harry, GOM (God's own medicine), crap, junk, horse dynamite (high-grade heroin), lemonade (low-grade heroin).

Injection of powder is called mainlining, blast or smack.

What are the effects of an overdose of heroin?

The effects of a heroin overdose are depression of the brain, which leads to drowsiness, snoring sounds, confusion and eventually coma, cravings, slowing of the heart, low blood pressure and possible heart failure, slow and shallow breathing, and cyanosed lips, with the main danger being respiratory arrest. 'Pinpoint' pupils are another feature. It can be treated with the antidote drug naloxone.

What are the long-term effects of heroin dependence?

The effects that make life uncomfortable for the dependent person include memory impairment, mood swings, depression, mental deterioration, constipation, irregular periods and infertility in women, and a loss of sex drive in men.

There are also the very serious effects of intravenous use, especially the risk of blood-borne diseases such as hepatitis B, hepatitis C, septicaemia and HIV (AIDS virus), particularly when sharing needles.

Tolerance and dependence

People who are physically dependent on heroin usually develop a tolerance to the drug, making it necessary for them to take more to get the desired effects, especially the 'rush'. Eventually a 'dose plateau' is reached in which no amount of drug is enough. At this stage, the drug tends to be used to avoid the withdrawal effects. Those who are psychologically dependent find that using it becomes more important than other activities in their lives. This leads to bad habits and even crime to get money to pay for the drug.

What are the withdrawal effects?

These develop within 12 hours of ceasing regular usage. The peak withdrawal symptoms usually occur between 36 and 72 hours later and tend to subside after 7 to 10 days. The symptoms include restlessness, irritability, anxiety and panic, chills and shivering, loss of appetite, nausea and possibly vomiting, excessive sweating, runny nose and watery eyes, insomnia, depression, low blood pressure, muscle aches and cramps, abdominal colic and diarrhoea.

What is the treatment?

Treatment involves a combination of methods and has to include the medical management of physical dependence and withdrawal in addition to the complex social and emotional factors. Patients should be referred to a treatment clinic, so that a shared-care approach can be used. Counselling, group therapy and social support are important strategies. If necessary, a patient can go 'cold turkey' (abrupt cessation) with the support of various drugs or undertake an ultra-rapid opiate detox (UROD) using drugs such as naltrexone.

The drugs used to treat withdrawal and ongoing maintenance are naltrexone, buprenorphine and methadone, which are all taken orally.

Methadone, an opioid drug, acts as a substitute for heroin and saves the heroin-dependent person money and the need to inject drugs that may be 'dirty' and of unknown strength.

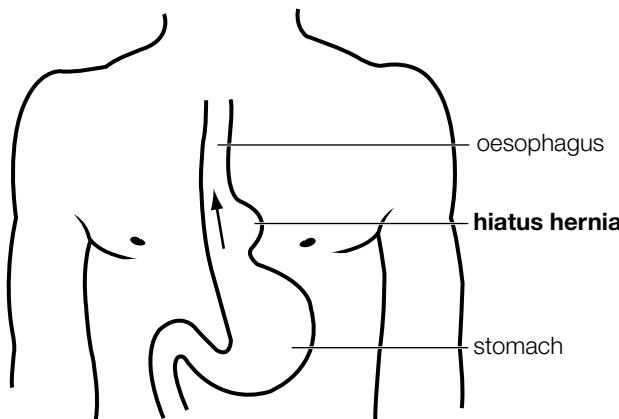
Important things to know

- Many people successfully grow through their period of dependence, especially with medical help, and a high percentage become rehabilitated by their mid-30s.
- 'Dirty' street heroin, which is a mixture of heroin of different strengths with substances such as caffeine and sugar, can be very toxic and dangerous.
- Sharing needles creates a risk of transmission of the AIDS and hepatitis viruses.
- Using heroin while pregnant can harm the unborn child, who usually needs special resuscitation after birth.
- It is unsafe and illegal to drive while taking heroin.
- For help, ask your doctor or approach the Australian Drug Foundation, www.adf.org.au.

Hiatus hernia

What is a hiatus hernia?

A hiatus hernia occurs when the upper part of the stomach, which is joined to the oesophagus (gullet), moves up into the chest through the hole (called a hiatus) in the diaphragm. It is common and occurs in about 10% of people.



What are the symptoms?

Most people are not troubled by a hiatus hernia, but if reflux of the acid contents of the stomach occurs (called gastro-oesophageal reflux), heartburn results. This is a painful burning sensation in the chest, which can sometimes be felt in the throat. Sudden regurgitation of acid fluid into the mouth can occur, especially when you lie down or bend forward. These symptoms are a problem when you go to bed and can wake you up. Other symptoms include belching, pain on swallowing hot fluids and a feeling of food sticking in the oesophagus.

Who gets a hiatus hernia?

It is most common in overweight middle-aged women and elderly people. It can occur during pregnancy. The diagnosis is confirmed by barium meal and swallow X-rays or by passing a tube with a camera on the end into the stomach (gastroscopy).

What are the risks?

Hiatus hernia is usually not serious; however, it can cause inflammation of the lower end of the oesophagus. This is

called reflux oesophagitis, and it may cause bleeding (perhaps anaemia) or a stricture. A serious complication is twisting (called volvulus) of the herniated stomach in the chest. The warning signs in the months beforehand are epigastric fullness and pain whilst eating. These patients cannot cope with large meals. Cancer in a hiatus hernia is very rare, but there is a slight increased risk of it developing in the inflamed area.

What is the treatment?

Self-help

- Keep to your ideal weight.
- Avoid stooping.
- Avoid smoking.
- Reduce alcohol and coffee.
- Avoid tight corsets or tight clothing around the waist.
- Adjust your bed by raising its head.
- Take antacids.
- Have small meals.
- Avoid spicy food.
- Avoid hot drinks.
- Avoid late meals.
- Avoid gassy drinks.

Losing weight nearly always cures it. Eating several small meals each day instead of 2 or 3 large ones helps. You must have a light evening meal without alcohol and avoid supper so that your stomach is empty on retiring. It takes about 1 to 2 hours for the stomach to empty.

Smoking certainly aggravates it, as do coffee and alcohol, especially spirits. If symptoms occur at night, you are advised to use extra pillows to prop up your head and shoulders. If this fails, you should raise the head of your bed about 10 centimetres to prevent acid reflux at night.

Medical help

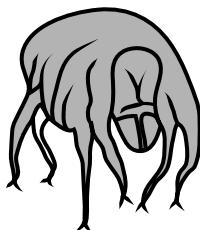
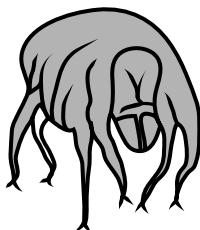
If over-the-counter antacids and other measures do not help, your doctor may prescribe a special mixture or tablets to reduce reflux. If your problem persists, an operation (which has good results) may be necessary.

The key to coping with a hiatus hernia is to maintain an ideal weight.

House dust mite management

What are house dust mites?

These are minute, insect-like organisms that cannot be seen with the naked eye. They live in house dust and thrive on eating human skin scales. They like warm, dark, humid conditions and multiply rapidly—the female mites can lay up to 50 eggs every 3 weeks.



House dust mites, magnified 300 times (actual size is that of a pin point)

Where are house dust mites mainly found?

- Bedrooms (the number 1 risk): pillows, blankets and mattresses
- Carpets
- Soft furnishings

What problems do they cause?

Allergy to the mite (dead or alive) and to its waste products (such as protein in faeces) is a problem for some people. The allergic symptoms include hay-fever-like symptoms (sneezing, itchy nose and eyes), asthma and eczema.

What should be done for these allergic patients?

It is best to prove allergy to house dust mite through skin testing. Sometimes we know about it through contact—for example having a reaction to sleeping on a dusty old mattress in another place. The best way to reduce allergic symptoms is to reduce your exposure to the mites and follow the steps of management.

Preventive steps

General points

- Direct sunlight kills the mites, so let lots of sunlight into the house.
- Keep the house well ventilated and as free of dampness as possible.
- Keep pets out of the house.

Bedding

- It is best to cover mattresses, pillows and quilts with premium-grade dust mite covers (your local pharmacist or the asthma foundation can advise you).
- Avoid feather doonas and pillows.
- Use bed linen, blankets and doonas that can be washed regularly. Wash them in hot water at 55°C or more.
- Electric blankets are considered to be okay.

Carpets

It is best to have no carpet, especially in the bedroom. Polished boards, linoleum, slate or tiles are preferred. For very sensitive patients it is advisable to remove any existing carpet. If carpet is necessary, keep it as clean as possible. Vacuuming stirs up the dust so the sufferer should avoid this task or wear a special protective mask. Movable floor coverings should be shaken and cleaned outside the house.

Soft furnishings

- Keep soft furnishings to a bare minimum in the bedroom.
- Avoid heavy curtains and wash the curtains regularly.
- Window blinds such as vertical blinds are preferable.

Soft toys

Avoid soft toys in the sleeping area. If you can't, have only a few and wash them regularly. Putting them in the deep freeze overnight (in a freezer bag) once a fortnight will kill the mites.

Living area

Avoid upholstered furniture if possible. It is preferable to use wipeable furniture such as leather, vinyl and wood.

Other tips

When dusting, use damp dusting in preference to a feather duster. Avoid dust collectors such as wall hangings and beanbags. Any stored clothing, especially jumpers and coats, should be aired in the sun before being worn.

Special insecticides (acaricides) are often used to destroy mites in carpets but they are expensive, of doubtful value and, on balance, not recommended.

Consider other aggravating allergens in the home, such as pets. They are best kept outside.

Best tips

- Use top-grade dust mite covers for bedding.
- Wash bed linen in hot water at or above 55°C.
- Avoid carpet and soft furnishings (if allergy is severe).

Hypertension

What is hypertension?

Hypertension means high blood pressure and is present when your blood pressure is greater than normal levels for the population. There are two types of blood pressure (BP) that we measure: systolic and diastolic. The systolic BP is the pressure at the moment the heart pumps the blood into circulation and the diastolic BP is the pressure when the heart relaxes and takes in blood. Both levels of pressure are very important.

BP is measured in millimetres of mercury (mm Hg). We have hypertension if our pressure is greater than either the systolic pressure (140) or the diastolic pressure (90) which are the standard uppermost limits of normal. Very high BP is one more than 180 systolic or 110 diastolic.

What are the normal and recommended levels of BP?

The Heart Foundation of Australia defines normal BP for all adults over 18 years as one that is less than 120 systolic and 80 diastolic. A pressure between 120/80 and 140/90 is regarded as in the higher level of normal. The normal BP for a person over 65 years is one that is less than 140 systolic and 90 diastolic. It is vitally important for people with diabetes and kidney disease to keep the BP below 130/80.

What causes hypertension?

In most cases (95%) there is no identifiable cause—it just happens that way. The pressure in our arteries is high because the heart pumps too hard and the arteries are too narrow. This is like the pressure in a hose—the further we turn up the tap and the narrower the hose, the greater the pressure. Sometimes hypertension is caused by a kidney problem or some other rare disorder. Prescribed drugs such as anti-inflammatory agents (NSAIDS), the oral contraceptive pill and some nasal sprays can aggravate BP. Drinking excessive amounts of alcohol is also an important cause.

Who gets hypertension?

Anyone can get it. It is very common and affects about 15 to 20% of the adult population in Western countries. BP tends to rise as we get older. However, most people are not aware they have it. It rarely gives warning symptoms.

What are the symptoms?

Usually there are none. People with very high BP can feel quite well. It is rare to feel headache, palpitations or sick until complications set in.

What are the risks of having it?

Hypertension is often referred to as the 'silent killer'. You are more likely to have strokes and heart attacks than people with normal BP. The risk increases as the BP rises. With time the pressure can cause the heart and kidneys to wear out, that is heart failure and kidney failure. By keeping the BP within normal limits, we reduce the risks of strokes and heart trouble, including coronary attacks and kidney failure.

What is the treatment?

Medication (called antihypertensive medication) can reduce your high BP, but it might be possible to lower your BP to normal by leading a sensible, healthy lifestyle. This self-help may avoid a lifelong commitment to drugs.

Self-help

- Diet: Follow a nutritious, low-fat diet.
- Salt: Put away the salt shaker; use only a little salt with your food.
- Obesity: Aim to keep to your ideal weight.
- Alcohol: Aim for either none or only small amounts (maximum of two standard drinks a day).
- Stress: Avoid stress and overwork. Consider relaxation or meditation classes.
- Exercise: Exercise regularly, aim for 30 minutes of daily activity such as walking.
- Smoking: This does not seem to cause high BP, but is a risk factor for heart disease—so please stop.

Medication

If natural measures do not bring down your BP, tablets will be necessary. The tablets act by softening the strong pumping action of the heart or relaxing the tight arteries or reducing the body chemicals that control your BP. The tablets must be taken regularly as directed and never stopped unless advised by your doctor. An appropriate BP target for adults 18 to 65 years is 130/85.

How often should your BP be checked?

If your BP is found to be normal it should be measured every 1 to 2 years by your doctor. If you are over 40 years, it is wise to have it checked every year because it tends to creep up with age. Women on the pill need to be checked regularly.



Hyperthyroidism

What are hyperthyroidism and hypothyroidism?

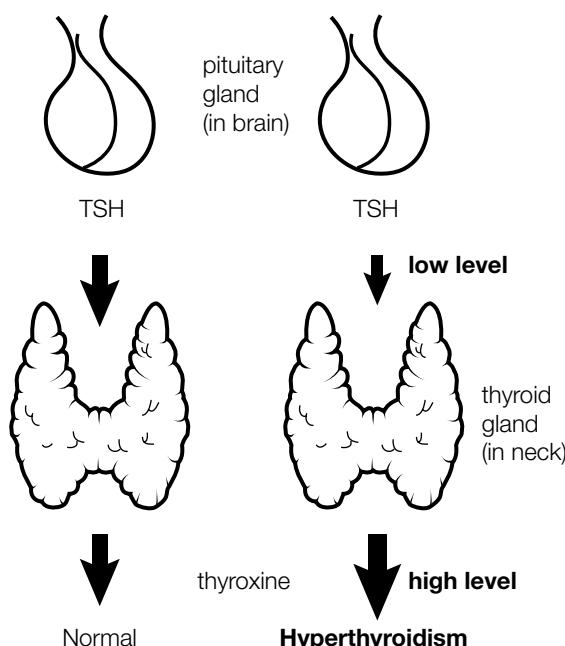
The thyroid gland, which is located in the lower part of the neck, produces important hormones including thyroxine, which controls the activity and metabolism of the body, including growth and energy expenditure. This process requires the essential element, iodine, to make thyroxine (T4) and triiodothyronine (T3). Hyperthyroidism occurs when there is too much thyroxine (and T3), whereby body functions tend to speed up and the person appears hyperactive. Hypothyroidism occurs when thyroxine is in low supply; in this case body functions go into slow motion.

What are some facts about hyperthyroidism?

Hyperthyroidism is also called toxic goitre, thyrotoxicosis or Graves' disease. It can occur at any age, but usually occurs between 20 and 50 years, and it is more common in women. About 2 in every 100 women will experience some degree of hyperthyroidism.

What are the symptoms of hyperthyroidism?

- Hyperactivity, restlessness, nervousness and irritability
- Loss of weight despite an increased appetite
- Sweating and a dislike of heat
- Palpitations due to a 'racing' heart
- Tiredness and muscle weakness
- Tremor of the hands
- Loose bowels
- Sleeping difficulties
- Hair loss (sometimes)
- A swelling of the gland (i.e. a goitre)
- Changes in menstruation



What are the causes of hyperthyroidism?

Some of the reasons include:

- Graves' disease—an abnormality of the immune system that generates excessive thyroxine
- an overactive thyroid nodule (a lump of abnormal thyroid tissue)
- drugs such as amiodarone and lithium
- inflammation (thyroiditis)
- taking excessive iodine.

How is it diagnosed?

Hyperthyroidism is diagnosed by blood tests called thyroid function tests. These assess the levels of:

- thyroid-stimulating hormone (TSH): in hyperthyroidism this hormone will be reduced below a normal level because the pituitary gland responds to an overproduction of thyroxine by trying to 'switch off' the activity of the thyroid gland
- thyroxine (T4): a high level confirms hyperthyroidism. Other tests include an ultrasound scan and a test for thyroid antibodies.

What are the risks?

With treatment the outlook is good, but if untreated the following serious problems can occur:

- heart disorders (e.g. abnormal rhythm, especially atrial fibrillation, angina and heart failure)
- eye problems: discomfort with grittiness, prominent and staring eyes causing blurred or double vision
- anxiety, such that it can be misdiagnosed as a psychiatric illness
- osteoporosis
- a thyroid 'storm', a sudden worsening of all symptoms to a medical emergency state.

What is the treatment?

The main aim of treatment is to reduce the level of thyroxine to normal. The methods are medication, radioactive iodine and surgery.

- Anti-thyroid medicines (usually carbimazole)—these depress the activity of the thyroid so that less thyroxine is produced.
- Radioiodine therapy—the iodine required to make thyroxine is radioactive so it slowly destroys part of the gland.
- Surgery—your specialist will decide if surgery to remove part or all of the gland is the best option. Surgery can be curative in 90% of those who have it.

Other drugs such as beta-blockers may be used to control symptoms such as palpitations.

Note: The treatments may cause the thyroid to go from overactive to underactive but this is easily treated with a top up of thyroxine.

Hypothyroidism

What is hypothyroidism?

Hypothyroidism is an underactive thyroid gland. This is a common problem especially in middle-aged and elderly women. It is sometimes referred to as myxoedema. The thyroid gland, which is located in the neck, produces an important hormone called thyroxine, which controls the activity or metabolism of the body. If thyroxine is low the body functions go into slow motion.

What are the causes of hypothyroidism?

Some of the reasons include:

- autoimmune damage (a type of self-destruction)—Hashimoto's disease
- surgical removal or radioactive destruction of the thyroid
- inflammation—thyroiditis
- lack of iodine in the diet
- drug effects (e.g. lithium, amiodarone)
- Down syndrome
- disorders of the pituitary gland (the master gland in the brain that controls the thyroid).

However, it can simply occur for no apparent reason. Sometimes babies are born with it (cretinism) and now they are routinely tested for it.

What are the symptoms?

The physical and mental slowing down of the body can develop over months or years and may not be noticed in the early stages. Common symptoms and signs include:

- tiredness, sluggishness
- constipation
- feeling cold, aches and pains
- weight gain
- mental slowing, slow movements, depression
- dry skin, coarse lifeless hair, hair loss, swollen thick skin, pallor, puffy face and eyes.

Less common symptoms include a hoarse voice, period problems, carpal tunnel syndrome of the wrist, chest pain (angina) and loss of libido. An enlarged thyroid (goitre) may be present.

How is it diagnosed?

It is diagnosed by blood tests called thyroid function tests including:

- thyroid-stimulating hormone (TSH): it is elevated since it is produced by the pituitary gland, which releases more TSH to stimulate the activity of the underactive thyroid

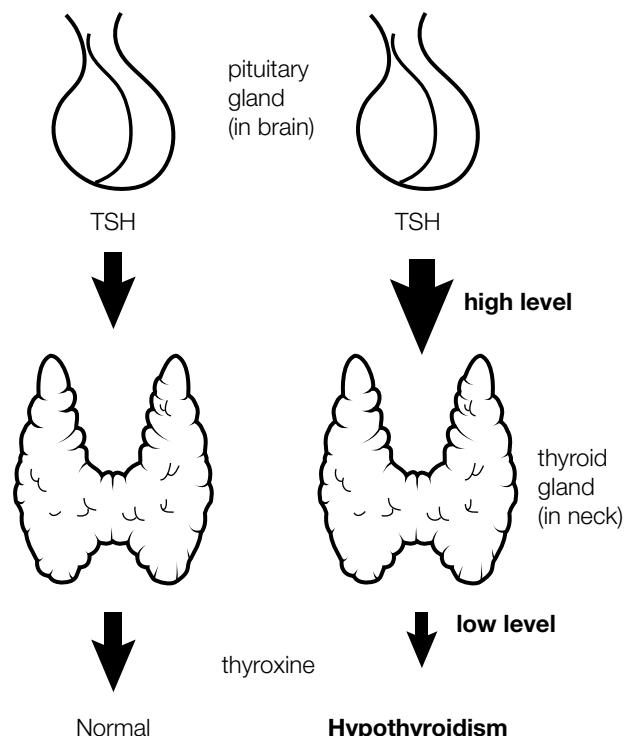
- thyroxine (T4): a low level confirms hypothyroidism. Other tests include an ultrasound scan and thyroid antibodies.

What are the risks?

With treatment the outlook is excellent. If untreated there is an increased risk of heart disease because of high cholesterol. A rare complication is the development of an unconscious state called myxoedema coma, which may be brought on by cold weather or certain drugs, especially sedatives.

What is the treatment?

Whatever the cause, treatment is basically simple. Patients take tablets of artificially produced thyroxine every day for the rest of their life. After a few months they return to normal health. Affected babies are started on treatment immediately. All patients require ongoing monitoring with blood tests to ensure that the replacement dose of thyroxine is correct.



Infertile couples

What is infertility?

Infertility is the inability to conceive after a period of 12 months of normal unprotected sexual intercourse; that is, not getting pregnant after a year of trying.

A more preferable term is subfertility, which is the situation where a couple has problems achieving conception. Recent research has shown that 4% of women regarded as infertile fell pregnant naturally over the next nine years without any fertility treatment such as in-vitro fertilisation (IVF) and ovulation induction. Sterility is the extreme case, when conception can never occur.

What is necessary for pregnancy to occur?

Three basic features are essential:

1. The right number of healthy sperm has to be placed in the right place at the right time.
2. The woman must be ovulating; that is, producing healthy ova (eggs).
3. The tubes must be functional and the woman's pelvis sufficiently healthy to allow fertilisation of the egg and then implantation in the uterus.

What are the statistics?

About 1 in 10 couples are infertile. The incidence increases with age, so that it gradually increases after the age of 32. About 100 000 couples in Australia have this problem. A group of 100 infertile couples will include:

- 45 with a female factor
- 40 with a male factor
- 15 with an unknown factor.

In about 25% there is a combined female and male factor.

What are the main specific causes?

- Faulty egg or sperm production that can be related to previous infections (such as mumps) or drugs (such as cancer treatment drugs and anabolic steroids)
- Blockages or other structural problems of the reproductive tract that could be congenital (present from birth) or acquired from infections
- Psychological factors, such as stress, anxiety or adverse lifestyle
- Problems with intercourse and with the timing of intercourse

What can be done?

If a couple has not conceived in 12 months, they should both visit their doctor. At first the doctor will work out

whether intercourse is frequent enough and suitably timed, and determine whether there is a sexual difficulty such as partial or occasional impotence or premature ejaculation. If a correctable condition comes to light, the couple will be given advice and told to try again for several months. If there is still a problem, the main tests that will be done are the sperm test in the male and the ovulation tests in the female.

The sperm test

The male is required to provide a complete ejaculate of semen, preferably by masturbation, after at least 3 days abstinence from sex. This fluid is placed in a clean bottle, kept warm and examined under the microscope within 1 hour.

Normal values are more than 2 mL with a sperm concentration of more than 20 million per millilitre and more than 50% normal forms and motility.

Ovulation tests

Ovulation can be worked out from the history of the nature of the periods, the cervical mucus and body temperature. Measurement of hormone levels in the blood on day 21 of the menstrual cycle will indicate whether ovulation is occurring.

Other special tests

If these tests are normal, there are many others (including special X-rays of the tubes and uterus of the female) that can be performed. However, your doctor will refer you to a specialist for management.

What is the outlook?

The outlook for subfertile couples improves all the time. Current specialised treatment helps up to 60% of couples to achieve pregnancy.

The emotional trauma of infertility

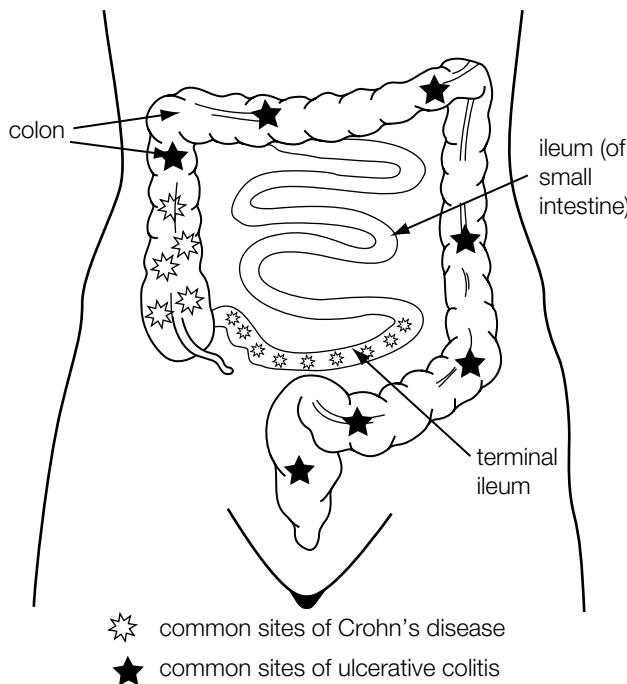
Persistent infertility is certainly associated with deep emotional problems that can flare up as crises from time to time. Unfortunately the emotional stress includes taking blame or placing blame on the other partner, and results in guilt feelings. Common feelings of infertile couples are surprise, denial and fear at first, and then frustration, anger, guilt, resentment, depression and loss of self-esteem. It cannot be emphasised enough that you should talk openly and honestly about your feelings and seek the help of a counsellor such as your family doctor.

Inflammatory bowel disease

What is inflammatory bowel disease?

Inflammatory bowel disease (IBD) is a serious chronic inflammation of the bowel especially affecting the colon (where it is called colitis) and the end of the small intestine, the ileum (called ileitis).

The two main conditions are Crohn's disease (CD) and ulcerative colitis (UC). The main feature of these two disorders is diarrhoea with blood and slimy mucus. Both sexes are equally affected and it tends to occur in young people from 15 to 40 years. The cause is not precisely known, but there are genetic factors that run in families.



Common sites of Crohn's disease and ulcerative colitis

What are the common symptoms?

The symptoms can vary according to the part of the bowel that is affected and also from person to person. They include:

- recurrent attacks of diarrhoea
- blood and mucus in the stools
- urgency to get to the toilet
- colicky abdominal pain (especially in CD)
- fever, malaise and weight loss (especially in CD)
- mouth ulcers (in CD)
- low back pain and arthritis
- inflammation of the eye.

What are the special features of ulcerative colitis?

- UC begins in the rectum and spreads upwards but does not extend beyond the junction of the colon and caecum.
- It causes ulcers of the inner lining of the colon and rectum.
- The main symptom is bloody diarrhoea.
- The main risk is development of cancer after 7–10 years.

What are the special features of Crohn's disease?

- CD mainly affects the ileum and colon.
- It occurs in patches.

- It involves the full thickness of the intestine wall and tends to cause bowel narrowing upon healing (strictures).
- The main symptom is colicky abdominal pain, especially after eating.
- CD is more likely to cause constitutional symptoms such as malaise, fever, anorexia, nausea and weight loss.
- Complications include intestinal obstruction, peritonitis, abscesses and fistula of the anus (an abnormal tract that can form between the anal canal and the skin around the anus).

How are these conditions diagnosed?

These conditions are diagnosed by inspection of the bowel through a colonoscopy or sigmoidoscope. CD can also be diagnosed by imaging such as barium studies or a CT scan.

What is the outlook?

The 'attacks' of pain and diarrhoea tend to recur (relapse), sometimes every few months or every few years, but usually for the rest of a person's life.

About 25% of people affected only ever have one or two attacks.

Many people remain well and have a normal life, including work and social activities. Doctors now have many modern treatments that can improve control of IBD.

What is the treatment?

The treatment includes self-help, medication and surgery.

Self-help

- Education and support including support groups
- Constant supervision with shared care between your GP and specialist
- Self-help through a healthy lifestyle, with a nutritious diet based on fruit and vegetables, regular exercise and relaxation
- Avoid foods that may aggravate the disorder (e.g. dairy, high fibre, spicy or fatty foods); there is no evidence that food allergy causes the disorder
- It is preferable not to smoke
- Take basic analgesics such as paracetamol or codeine for mild episodes of pain (avoid aspirin)
- Heat can soothe discomfort—try applying a warm pack or warm compress to the abdomen.

Medication

In most cases treatment with special drugs will ease the attacks and guard against further attacks. These include:

- 5-aminoosalicylic acid agents such as sulfasalazine (the mainstay drug), olsalazine and mesalazine
- corticosteroids, which are used mainly for acute flares, including oral prednisolone, injections and topical preparations such as rectal foam, suppositories and enemas
- immune-suppressing drugs such as azathioprine and methotrexate and biological agents such as infliximab.

Mild attacks can be managed outside of hospital, but if attacks are severe it is necessary to attend hospital for fluid and electrolyte replacement.

Surgery

Doctors generally avoid operating but surgery is recommended for complications, especially for CD.

Ingrowing toenails

An ingrowing toenail occurs when the nail of the big toe curves under at the sides of the nail so that it grows into the skin.

What is the cause?

The two main contributing causes are the wearing of tight shoes and the incorrect cutting of the nails. If the nails are cut on a curve and down at the sides, the nail edges grow into the skin. A spike of nail gets embedded in the skin and causes problems. However, some people, despite cutting their nails properly and using good footwear, have very wide nails that tend to be ingrown.

What are the symptoms?

Most ingrowing nails do not cause discomfort, but sometimes when they are not attended to they cause pain, especially if tight shoes are worn. The problem is most troublesome when the skin around the ingrowing toenail becomes infected.

How can ingrowing nails be prevented?

It is important to fashion the toenail so that the corners project beyond the skin. The nail should be cut across so that the cuts slope towards the centre of the nail and not down towards the edges.

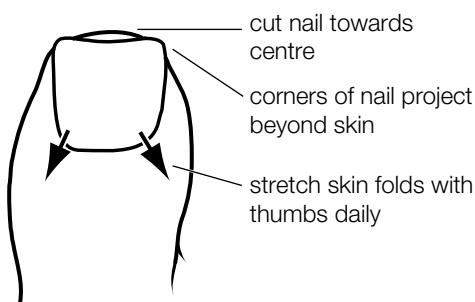
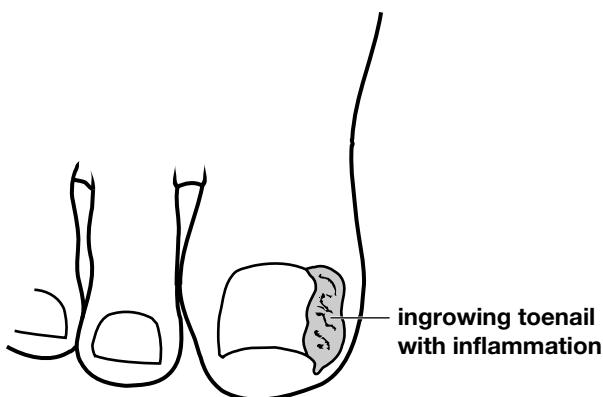
Each day, after a shower or bath, use the pads of both thumbs to stretch the nail folds at the base as shown.

What is the treatment?

If you have an ingrowing toenail, cut the nail as described and be careful not to leave spikes at the edges. It is especially important not to dig the scissors into the ingrowing corners and injure the tissues. This injury, which tends to cause minor bleeding, often leads to a nasty infection that can take weeks to heal.

Make sure you wear good-fitting shoes and keep the area clean and dry at all times.

Your doctor may choose to use one of several methods to remove the ingrowing nails, including removing the wedge of nail or skin fold so that the leading edge of the nail lies free.



Inguinal hernia

What is a hernia?

A hernia is a bulge or protrusion of soft tissue through the firm muscles of the abdominal wall. This occurs where there tends to be a weak area in the abdomen, and this is usually in the groin area of men where the spermatic cord passes into the scrotum—the inguinal canal. The inside of the abdominal cavity is a high-pressure area, especially with straining and lifting. This pressure can cause a blind pouch to bulge out through one of the weak spots. For this reason a hernia has been referred to since ancient times as a rupture. A useful analogy is a wind sock that stretches out with a gusty wind or blowing up a balloon. This bulge in the groin may appear at birth or develop in later life. The most common and best-known hernia is the inguinal hernia.

What is an inguinal hernia?

An inguinal hernia is a hernia that appears at the lowest end of the abdomen just above the inguinal ligament. The inguinal ligament is the firm band that marks the lowest point or boundary of the abdomen and the pelvis. The hernia may be confined to the inguinal region or may pass into the scrotum in males or vulva in females. The hernia may be present at birth or appear soon after birth. On the other hand it often appears in later life with a tendency to increase with age.

Note: A femoral hernia, which is common, is one that is situated in the groin below the inguinal ligament.

What are the risk factors for getting a hernia?

- Increasing age: adults over 60
- Premature infants
- Obesity
- Chronic cough (e.g. smoker's cough)
- Pregnancy
- Straining (e.g. chronic constipation)
- Difficult urination (e.g. enlarged prostate)

What are the features and symptoms of an inguinal hernia?

It is more common in men. Hernias are usually painless, but mild pain or transient discomfort including a heavy feeling can occur. The main symptom is a bulge or swelling in the groin. It can usually be pushed back into the abdomen with pressure from the fingers or may simply disappear upon lying down.

In men the presence of a large lump or swelling can also be a sign of a hernia. Loops of intestine can get into the hernia and the gurgling noise of the bowel can be felt or heard.

What is the risk of the hernia?

The main risk is obstruction of a loop of intestine in the sac (pouch) of the hernia. This will result in severe pain in the lower abdomen, nausea and vomiting. A more serious risk is strangulation where the blood supply of the trapped intestine is cut off. The strangulated hernia becomes swollen, red and very painful. It is a surgical emergency.

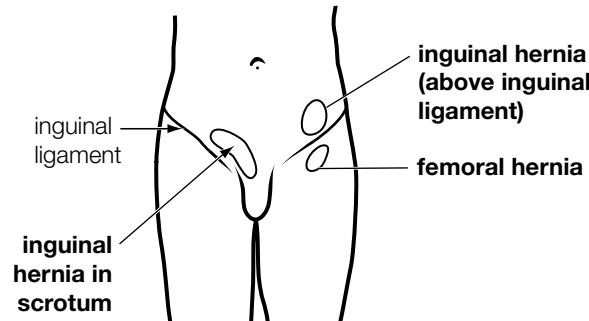
What is the treatment?

The best way to deal with an inguinal hernia is to remove it by a straightforward operation. Early surgery is important in infants and children, particularly in children under 6 months and especially in the first 6 weeks of life. Hernias are repaired by pushing the sac back into the abdomen and then sewing over the weakened opening in the muscle with strong stitching or inserting a special mesh. In adults most hernias tend to get worse with time and therefore surgery to avoid obstruction is best.

In elderly people with a non-painful reducible hernia, a supportive garment or truss can be used. Trusses can also be used in those unfit for surgery or while awaiting surgery.

Special tips

Keep to an ideal weight, adjust diet to avoid constipation, and avoid heavy lifting, straining and coughing (if possible).



Iron deficiency anaemia

What is iron deficiency anaemia?

Iron is one of the vital chemicals of haemoglobin, the red pigment in red blood cells that carries oxygen from the lungs to the body's tissues. If iron is deficient in the body, the production of haemoglobin is reduced and the red cells are therefore reduced or weak; this is known as anaemia.

What are the symptoms of anaemia?

There may be no symptoms at first, then tiredness, weakness, breathlessness, faintness and loss of interest in things are the main symptoms. Pallor, especially of the lining of the lower eyelid, is a sign.

What are the causes?

Lack of iron is due to 1 or more of 4 main reasons:

1. not enough iron in the diet, especially in growing infants and vegetarians
2. poor absorption of iron from the bowel (caused by disease of the bowel such as coeliac disease)
3. excessive loss of blood, such as menstrual loss, bleeding from cancer or ulcers in the bowel or stomach or bleeding from haemorrhoids (piles)
4. increased demand, such as pregnancy and breastfeeding, adolescent growth spurt.

Who is likely to get anaemia?

- Premature infants
- Children, especially those 6 to 36 months old with a diet high in cow's milk and low in iron-containing foods
- Women, especially those with heavy periods and lack of dietary iron (3 in 10 have low iron reserves)
- The elderly (through poor diet and chronic illness)
- Vegetarians
- Athletes, who lose iron in sweat and urine

Anaemia can also develop in those with rapid growth spurts (e.g. adolescents). Those taking certain drugs, such as aspirin or anti-inflammatories, are prone to slow gastric bleeding, which can lead to anaemia. The most common cause of iron deficiency in the world is from hookworm infestation of the bowel in tropical areas.

How is anaemia diagnosed?

Anaemia is diagnosed by taking a blood sample and sending it to a laboratory for testing. Iron deficiency can be diagnosed by the appearance of the blood and size of the cells. If this is so, further blood is taken to measure the level of iron stores in the body.

What are the main problems?

Iron deficiency anaemia is unlikely to be fatal, but the cause is the concern. In older adults the possibility of bleeding from cancer of the bowel or stomach must be considered. The ideal tests for this are looking directly into the empty organs with a viewing scope. The outlook for those with iron deficiency anaemia is usually very good.

What is the treatment?

The most important thing to do is correct the underlying cause. If investigations give the all clear for a serious bleeding

problem, it is likely that the cause is lack of iron in the diet and this is easily corrected. Sometimes a blood transfusion is necessary to correct severe anaemia, especially if you are facing surgery.

Medication

Iron supplements: Iron tablets are preferred to injections of iron but have a reputation for causing gastric upsets such as indigestion and nausea. It needs to be in the ferrous (not ferric) form.

- Take 1 tablet a day or 2 tablets every second day.
- Take iron on an empty stomach (e.g. 30 minutes before meals).
- Take vitamin C to help absorption.
- Wait 2 hours before taking other medications such as antacids.
- Take iron tablets with a small amount of food (not milk) if they upset the stomach.
- Continue the tablets for at least 3 months.

In children iron is best given daily before meals with orange juice. Liquid iron can discolour children's teeth—drinking it through a straw helps avoid this.

Diet

Limit milk intake to 500 mL a day while on iron tablets. Avoid excess caffeine, fad diets and excess processed bread. Eat ample iron-rich foods (especially protein).

Protein foods

- Meats: beef (especially), veal, pork, liver, poultry
- Fish and shellfish (e.g. oysters, sardines, tuna)
- Seeds (e.g. sesame, pumpkin)
- Eggs

Fruits

- Dried fruits (e.g. prunes, figs, raisins, peaches)
- Juices (e.g. prune, blackberry)
- Most fresh fruit

Vegetables

- Greens (e.g. spinach, silverbeet, lettuce)
- Dried peas and beans (e.g. kidney beans)
- Pumpkin, sweet potatoes

Grains

- Iron-fortified breads and dry cereals
- Oatmeal cereal

For better iron absorption, add foods rich in vitamin C (e.g. citrus fruits, cantaloupe, brussel sprouts, broccoli, cauliflower).

Prevention of iron deficiency

- Aim for a well-balanced diet with adequate iron.
- Give bottle-fed infants an iron-fortified formula and iron-containing foods as soon as solids are started.

Irritable bowel

What is it?

An irritable bowel (also known as irritable colon or irritable digestive system) is one that does not work smoothly and causes abdominal problems such as colicky pain and disturbed bowel actions. The bowel is a muscular tube that propels the food along in waves (called peristalsis). This muscular action may become overactive and cause spasms or tight contractions rather like a cramp in the leg muscles.

What are the causes?

There is no clear-cut proven cause but one theory is that an important factor is emotional stress, especially in those people who tend to 'bottle things up inside'. However, there is no proof supporting this theory. Possible causes or aggravating factors are:

- infection of the bowel (e.g. gastroenteritis)
- food irritation (e.g. spicy food)
- food allergy (e.g. milk, cream)
- lack of bulk (fibre) in the diet
- overuse of laxatives
- pain-killing drugs and antibiotics
- smoking
- salicylates or related chemicals such as aspirin, food colourings and fresh pineapple.

What are the symptoms?

The main symptom is a vague discomfort or a cramp-like pain in the abdomen (in the centre or lower left side). This pain is usually relieved by passing wind or by a bowel movement.

Diarrhoea or constipation or both (alternating) may occur, and sometimes the motions will be like small, hard pellets. Mucus may also be passed from time to time.

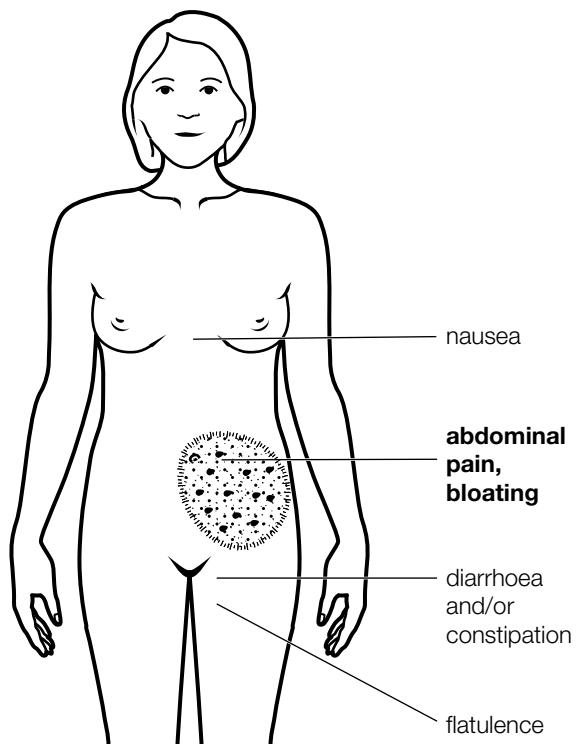
You may also feel mildly nauseated, off your food, bloated or flatulent (windy). There may also be a sensation of incomplete emptying of the bowel.

How common is it?

At least 1 person in every 100 has it, and many simply learn to live with it. Some authorities believe that up to 30% of the population have it to some degree. It can develop at any age but it usually begins in the late teens or early 20s. It is likely to affect twice as many women as men.

What are the risks?

The irritable bowel is harmless, but it is common for those with it to worry that they have cancer. It is usual to carry out investigations to ensure that there is no disease in the bowel. There is no cure and the problem may come and go for years.



Symptoms of an irritable bowel

What is the treatment?

Self-help

Anyone with an irritable bowel should try to work out the things that make the symptoms worse. If you recognise stresses and strains in your life, try to develop a more relaxed lifestyle. You may have to be less of a perfectionist in your approach to life.

Try to avoid any foods that you can identify as causing the problem. You may have to restrict or cut out smoking and alcohol. A high fluid intake and a high-fibre diet may be the answer to your problem. This can be helped by adding 2 teaspoonfuls of unprocessed bran to your diet each day if increased fibre and fluids have not quite settled the problem. The best fibre is 'soluble' fibre—that which is found in oats and green vegetables. Some 'insoluble' fibres such as legumes, seeds and nuts can aggravate irritable bowel.

Medical help

If self-help measures are not controlling the problem, your doctor will be able to give you medicine to settle the painful spasm of an irritable bowel. You should avoid taking any medicines not recommended by your doctor.

Kidney disease

Kidney disease is common, with 1 in 7 adult Australians over 25 years of age having at least one sign of chronic kidney disease. It is particularly common in people with poorly controlled diabetes and high blood pressure. Other causes include glomerulonephritis, polycystic kidney disease, reflux kidney damage, drugs and renal artery stenosis.

Kidney (renal) failure occurs in one of three forms:

1. Acute failure—the kidneys suddenly stop functioning.
2. Chronic failure—the disorder develops gradually over many years.
3. End-stage failure—kidney function is so poor that technical support is needed to take over kidney function.

Chronic kidney disease (CKD)

CKD is where the kidneys are damaged and do not filter the waste products out of the blood efficiently so that toxic products build up in the body. In addition kidneys regulate blood pressure, fluid level, levels of salts including sodium and potassium and help prevent anaemia. A breakdown in kidney function is called kidney failure. It usually comes on gradually over a long period of time and people can be unaware they have CKD. We describe five stages of CKD and special care is needed to manage the dangerous stages 4 and 5.

What are the symptoms?

The symptoms can be subtle. Most people with mild to moderate CKD (stages 1, 2 and possibly 3) do not have any symptoms, which tend to manifest at stages 4 and 5. These include:

- generally feeling unwell
- tiredness and lethargy
- anorexia (poor appetite)
- nausea and vomiting
- muscle cramps
- dry and itchy skin.

What are the risk factors for CKD?

- Diabetes
- High blood pressure
- Obesity
- Family history of kidney disease
- Increasing age
- Aboriginal or Torres Strait Islander descent
- Smoking
- Drug overuse and abuse

What are the complications?

There is a gradual build-up of waste products (e.g. urea) and chemicals (e.g. potassium) in your blood and the kidneys have difficulty limiting the amount of water passing into the urine.

Early signs include the effects of anaemia and increasing high blood pressure.

Note that high blood pressure can be both a cause and a result of CKD.

How is CKD diagnosed?

The levels of creatinine and albumin in the blood and urine give an indication of kidney function and the presence of disease. A blood test called the eGFR (estimated glomerular filtration rate) is commonly used. Normal is above 90 while less than 30 indicates severe failure and less than 15 end-stage failure.

What is the treatment of CKD?

Early-stage CKD is treated with advice about diet (low in protein, fat and salt—sodium and potassium), careful use of drugs, ample fluids (take care with fluids—keep a fluid in/fluid out diary), avoiding smoking and regular physical activity. The medication used in early-stage disease is an ACE inhibitor drug, which also helps lower blood pressure.

End-stage treatment options are:

- dialysis
- kidney transplantation.

Dialysis

Dialysis is a method of removing waste products from your blood when the kidneys fail. Patients cannot survive longer than 5 days without dialysis. It can be provided in two main ways.

1. Haemodialysis, using an ‘artificial kidney’ machine to take blood from your body and pump it through a filtering machine, then returning the purified blood to the body at the same rate at which it is removed. Each treatment, which can be done in a ‘dialysis unit’ or at home, takes about 4 to 6 hours and is usually given 3 times a week. A new approach is nocturnal dialysis given overnight during sleep.
2. Peritoneal dialysis, where fluid is exchanged by infusing a cleansing fluid into the peritoneal cavity of the abdomen and then draining away the used fluid. It is usual to have an indwelling catheter in the cavity. Your doctor will work out the number of exchanges needed, which vary from one person to another. Peritoneal dialysis can be done at home provided sterile practice is followed. Varieties are continuous ambulatory peritoneal dialysis (CAPD) performed for about 30 minutes about 4 times a day and automated peritoneal dialysis (APD) where a machine (cycler) exchanges fluid during sleep.

Kidney transplantation

A kidney transplant from a living or deceased donor allows more freedom in lifestyle but has its downside. The recipient requires a lifetime of care and medical management including medication to avoid rejection. The old kidneys are left in the body but do no harm.

Kidney stones

What are kidney stones?

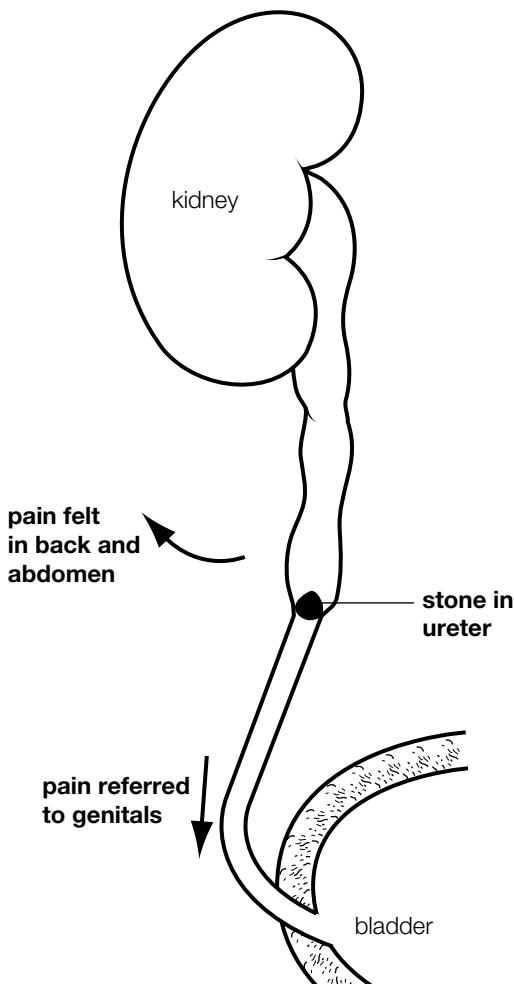
Kidney stones are small hard ‘stones’ that form in the kidney and sometimes move into the ureter. They vary in size from a grain of sand to a golf ball and in number from one to several. They are also referred to as renal calculi or urinary calculi.

How are they formed?

A stone usually begins as a tiny, sand-like speck of material in the outlet flow of the kidney. Minerals in the urine, especially calcium, then build on the speck, similar to the way pearls grow in oyster shells. Most are flushed out, but some can remain and grow over a period of many years. Excessive amounts of minerals in the urine, such as calcium, uric acid and oxalate, make stone formation likely—as does concentrated urine, which occurs in people who drink only small amounts of fluid.

Who gets kidney stones?

Anyone can get them. About 1 person in every 400 suffers from the problems they cause. They have been found in Egyptian mummies from 6000 years ago. The main ages affected are from 20 to 50 (the peak age is about 30) and males are 3 times more likely to get them. Risk factors include pregnancy, a low-fibre diet, hot climates, ‘holding on’ to a full bladder, such as happens with troops in battle, and kidney infections.



What are the symptoms?

There may be no symptoms, especially with tiny stones that flush out or with large stones that are too big to pass, although some of these may cause backache in the kidney area. However, when small stones pass into the long muscular tube called the ureter, excruciating pain called colic usually develops. Colic usually comes on suddenly and lasts until the stone is passed into the bladder; this can take a few hours (but usually less than 8 hours). Other symptoms include vomiting and small amounts of blood in the urine.

What causes the pain?

The pain of ureteric colic is caused by movements of the stone in the ureter that stretch the narrow muscular tube and cause intense spasm.

What is the treatment?

The treatment of severe colic is a pain-killing injection, which can be a strong narcotic, or one of the anti-inflammatory drugs. An anti-inflammatory drug, in the form of oral tablets or suppositories, may be prescribed after the attack settles. The urine is tested and X-rays are taken to find any stones and to check the structure of the urinary tract.

What are the risks?

Although most stones either remain in the kidneys causing no harm or pass in the urine, some may get stuck in the ureter and require a surgical procedure to remove them. Some kidney stones may cause infection. Very large, troublesome stones may require shattering with special shock waves in a treatment called lithotripsy.

How can the problem be prevented?

Prevention applies mainly to those who have had an attack, especially recurrent attacks. Your doctor will organise tests to see if you have too much calcium or troublesome acids in your blood or urine and, if so, will advise you accordingly.

Dietary advice includes the following:

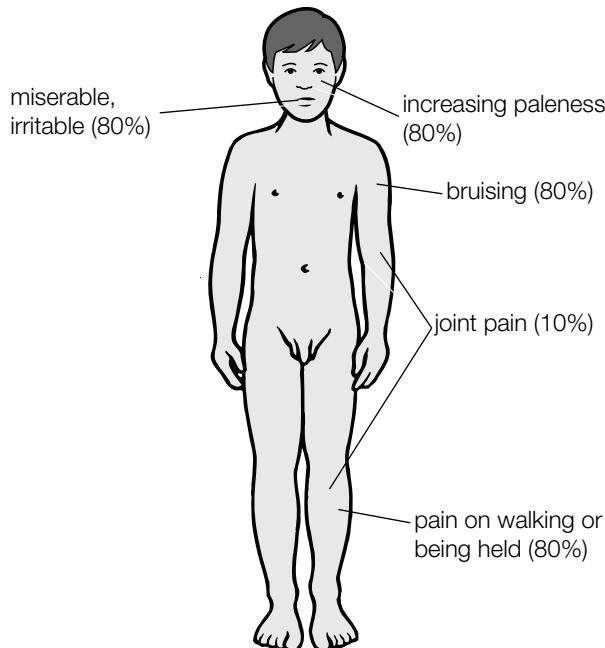
- Drink at least 2 litres of water every day.
- Reduce uric-acid-containing foods, especially beer, red meat, red wine and organ meats (brain, kidney, liver, sweetbread).
- Reduce oxalate-containing foods, especially chocolate, rhubarb, vitamin C tablets, tea, coffee and cola drinks.
- Avoid processed meats, organ meats, yeast spreads and high-salt foods. Restrict salt intake.
- Reduce your animal protein consumption: restrict yourself to one major meat meal a day.
- Have a high-fibre diet—plenty of vegetables and fruit.

What is leukaemia?

Leukaemia is a cancer of white blood cells, which are a component of blood. Normally, in the bone marrow and in lymph tissue, the body produces a balanced number of white cells to protect itself against infection, but in leukaemia the stem (that is, precursor) cells divide at an abnormally fast rate and produce a high number of abnormal white cells. This overproduction results in vast numbers of these cells spreading in the blood and throughout the body and thus making it prone to infection.

There are two main types of leukaemia:

- Lymphatic leukaemia affects white cells called lymphocytes, which are produced mainly in lymph glands.
 - Myeloid leukaemia affects the myeloid (granulocyte) cells produced in bone marrow.
- Both types can be acute or chronic.
- Acute leukaemia develops suddenly over days or weeks.
 - Chronic leukaemia develops over months or years.



Features of a child with leukaemia

What are the four main presentations of leukaemia?

- Acute lymphocytic leukaemia—most common in children, usual age 2–10 years; rare in adults
- Chronic lymphocytic leukaemia—develops slowly; affects adults only, especially the elderly
- Acute myeloid leukaemia—mainly affects adults but occurs in all age groups
- Chronic myeloid leukaemia—all ages but uncommon below 20 years; typically occurs at 40–60 years

What are the symptoms?

The symptoms vary according to the type of leukaemia.

Acute leukaemia

As a rule, the symptoms of acute leukaemia develop suddenly.

- Constitutional—tiredness, weakness, malaise
- Effects of anaemia (e.g. looking pale and ‘washed out’)
- Regular infections and fever
- Easy bleeding from gums and nose
- Easy bruising—often with no obvious cause
- Pain in the bones and joints
- Swollen lymph glands
- Abdominal discomfort from large spleen and liver

Chronic leukaemia

These people have similar symptoms but they develop over a longer period. Other symptoms include night sweats and weight loss.

What is the cause of leukaemia?

The precise cause is unknown but there are several suspected risk or predisposing factors, including family history, genetic factors in certain inherited conditions such as Down syndrome, excessive exposure to X-rays (radiation), exposure to benzene and other toxic industrial chemicals, cigarette smoking and immunosuppression in chronic illness.

What are the diagnostic tests?

The usual tests to diagnose leukaemia include:

- full blood tests—to examine for abnormal white blood cells
 - bone marrow biopsy—to determine the type of leukaemia
 - lymph gland biopsy—tissue removed for microscopic examination
 - lumbar puncture—to examine spinal fluid.
- Special scans such as CT or MRI may be required.

What is the treatment?

The treatment, which depends on the type of leukaemia, includes:

- chemotherapy (the main form of treatment), which kills fast-growing cancer cells
- biological therapy (immunotherapy), in which substances are used to assist the body to boost its immune system to fight disease
- radiotherapy
- stem cell transplant using immature white cells (stem cells), which allows stronger dosage of chemotherapy and radiotherapy to destroy the abnormal cells. The person's own stem cells (autologous transplant) or a donor's compatible stem cells (allogenic transplant) can be used.

The stem cells are taken from bone marrow.

Other therapies include corticosteroids and vitamin A analogues, which are effective with some forms of leukaemia.

What is the outlook?

Most children and many adults can expect to be cured with modern treatments. If untreated, acute leukaemia can lead to death within weeks. Today, 2 out of 3 affected children will be cured. For most people, chronic leukaemia can be successfully managed for many years, some without any form of treatment. When treatment is needed, the life expectancy of many will be at least 20 years.

Lung cancer

What are the facts about lung cancer?

Lung cancer, also called bronchial carcinoma, is the most common cause of death from cancer in the Western world. It accounts for about 25% of cancer deaths in both men and women in Australia and it is steadily increasing in women. The problem usually comes to medical attention between 45 and 70 years with an average age on presentation of 67 years. Up to 9 out of 10 cancers are caused by smoking, which damages the cells that line the bronchial tubes. The damaged cells develop into a wart-like tumour that steadily grows into cancer. A cancer that develops in the lining of the lung is called a carcinoma.

What are the different types of lung cancer?

There are different types of lung cancer but the two main types are classified as:

1. small-cell carcinoma (SCLC)—15% of lung cancers and rapidly lethal
2. non-small-cell carcinoma (NSCLC)—includes:
 - squamous cell carcinoma, which has the best outcome
 - adenocarcinoma
 - bronchiolo-alveolar cell carcinoma
 - large-cell carcinoma.

Another type of lung cancer is the deadly mesothelioma caused by inhaling asbestos fibres. It arises from the outer lining of the lung (the pleura).

What are the symptoms?

Some lung cancers have no symptoms but the common and first symptom is usually a cough. The person with a smoker's cough will notice an increase in their usual cough.

Local symptoms include:

- persistent cough
- blood-stained sputum
- shortness of breath
- pains in the chest
- wheezing.

General symptoms include anorexia (poor appetite), malaise (feeling unwell) and weight loss. Other symptoms include hoarseness and others related to distant spread of the disease (metastases).

How is lung cancer diagnosed?

The tests used to diagnose it include:

- X-rays of chest—the first-line test
- sputum cytology, which may show cancer cells under the microscope

- CT scan
- bronchoscopy, where a flexible camera-tipped tube is used to inspect the bronchial tubes and lung tissue
- fine needle aspiration, where a needle is inserted through the chest wall to take a sample of lung tissue.

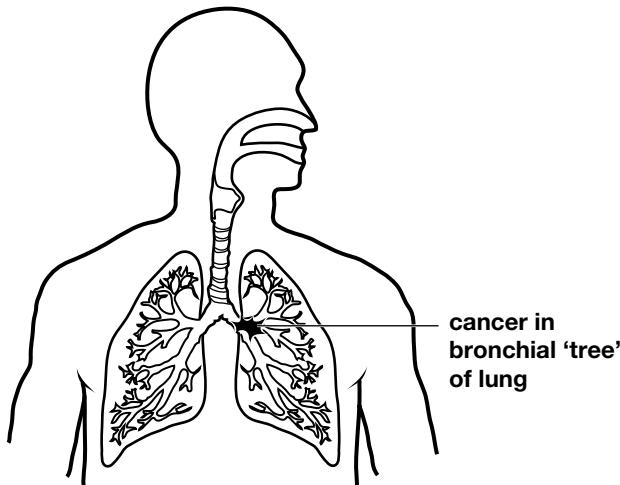
Other special investigations may include a PET scan, mediastinoscopy, fluorescence bronchoscopy and video-assisted thoracoscopic surgery.

How is lung cancer treated?

If you smoke, it is important to give it up, as this will help slow any progress of the cancer. The treatment methods include surgery, chemotherapy (drugs to kill the cancer cells), radiotherapy and multimodality therapy, which is a combination of these treatments. The choice of treatment will depend on the type of cancer and its extent or staging.

The main aim of treatment is a curative removal of NSCLC in those who can benefit from it and where it has not spread beyond the lungs. This surgery is usually followed by chemotherapy.

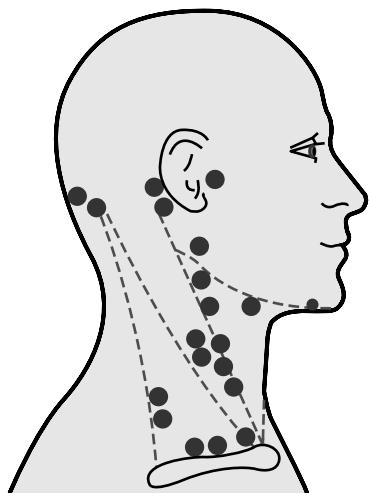
Surgery is not an option for SCLC since it spreads (metastasises) so rapidly; 80% have done so by the time of diagnosis. Chemotherapy has a place in the treatment of SCLC but only extends life expectancy for up to 24 months at best. This is referred to as palliation therapy and this is also the main role of radiotherapy.



Lymph gland enlargement

What are lymph glands?

Lymph glands (also called lymph nodes) are found throughout the body, where they form groups or chains. The glands are linked by a network of lymph drains or channels and the system is called the lymphatic system. The glands, which are normally the size of a pea, may come to our attention if they swell. These swellings are most common in the neck, the groin and axilla (armpits).



Typical sites of lymph glands in the head and neck

What is lymph?

Lymph is a straw-coloured fluid, composed mainly of water, salts and white blood cells (lymphocytes) that bathe the cells of the body. It carries nutrients and oxygen from the blood to these cells. Lymph travels in the lymph channels through the lymph glands and a huge gland called the spleen before draining into the bloodstream.

The lymphatic system is similar to the system of blood vessels comprising the vascular system and actually works in tandem with that system to nourish and protect the body.

What is the function of the lymphatic system?

The primary function is that of a defence system against infection by promoting the body's immunity. Lymph contains lymphocytes, the scavengers of the body, which seek out and destroy harmful invaders such as viruses, bacteria and other unwelcome germs and foreign particles.

The glands act as barriers to the spread of infection through the lymphatic system by trapping germs travelling along it. This reaction results in swelling of the glands.

What are the symptoms of swollen lymph glands?

You are usually unaware of the lymph glands, although sometimes you can feel some under the skin, especially in

the neck and groin. However, you can usually feel them when they swell and they may swell to the size of marbles or even larger. If the swelling is related to a bacterial infection the glands may be quite painful, especially with sexually transmitted infections affecting glands in the groin. In many other conditions, especially cancers, the glands may be smooth, rubbery and painless. It is not possible to see or feel enlarged lymph glands in deeper structures such as the chest, abdomen or pelvis.

What causes swollen lymph glands?

The most common cause is infection from bacteria and viruses. The lymph nodes adjacent to the site of infection swell quickly and become tender as the immune system fights off invading germs. The nodes then usually return to their normal pea size when the infection improves.

Examples include:

- throat infections and tonsillitis causing swollen neck glands
- skin infections of the hand and arm causing swollen armpit glands
- infections of the leg or genitals causing swollen groin glands
- glandular fever causing swollen glands all over the body. Another important but less common cause is cancer, especially of the lymphatic and blood systems, namely lymphoma and leukaemia.

Examples include:

- breast cancer, which may spread to the armpit lymph nodes
- throat cancer to the neck lymph glands
- lymphoma causing swollen glands all over the body.

What about swollen neck nodes in children?

This is a very common reason for attending the doctor and causes considerable anxiety. It is usually due to infection of the throat (pharyngitis) and tonsillitis commonly caused by viruses. In some people the neck glands may go up and down in size as these infections come and go. It usually takes a week or so for a swollen gland to return to normal. In most cases there is no need to be concerned.

What should be done if you find a swollen node?

If you are concerned it is important to consult your doctor. In most instances the reason, such as a viral infection or tooth infection, will be found and reassurance given. If no obvious reason can be found, or if the gland or glands do not go down after a few weeks, your doctor may arrange to remove the gland for microscopic examination (called a biopsy). These are usually found to be normal and the swelling due to an inflammatory reaction, but sometimes cancer, particularly in older people, either from the lymphatic system or from elsewhere in the body, may be found. Lymphoma and leukaemia can be found in all age groups. Glands containing cancer are usually harder and larger.

Lymphoma

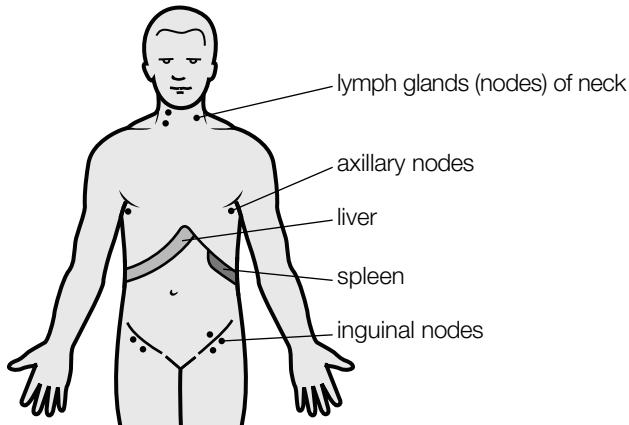
What is lymphoma?

Lymphoma is a cancer that originates in the lymphatic system when a lymphocyte (a type of white blood cell) begins to multiply out of control. This results in many abnormal lymphocytes that cause swelling of the lymph glands (or nodes) and this affects the immunity of the body, which is the important function of the lymphatic system. The abnormal cells spread throughout the lymphatic circulation to the spleen and the many lymph glands around the body.

There are two main types of lymphoma:

- Hodgkin's lymphoma
- non-Hodgkin's lymphoma.

Lymphomas are 'staged' according to the location and spread of the lymph glands and classified as stages I, II, III and IV, where III and IV types have spread to both sides of the diaphragm. Each stage is divided further into A or B, where B indicates symptoms of fevers, night sweats or weight loss.



Main sites of body affected by lymphoma

What are the symptoms?

- Swelling of the lymph glands of the neck (the most common site), armpit or groin
- Feeling 'generally unwell'
- Loss of appetite and weight
- Fluctuating fever and night sweats
- Itching of the skin (in some)
- Heavy abdomen from a large spleen

It is usually diagnosed by removing a lymph gland (biopsy) and examining the tissue under a microscope. Other investigations that may be ordered include bone marrow biopsy, chest X-ray, blood cell examination, CT scan and PET scan.

What is the cause of lymphoma?

The actual cause is unknown and it appears unlikely that there is a single cause.

The known risk factors for lymphoma include:

- exposure to radiation
- exposure to certain chemicals
- infection with viruses such as glandular fever virus in a depressed immune system.

Who gets lymphoma?

Anyone can be affected by lymphomas. Most cases of Hodgkin's lymphoma occur in young adults between the ages of 20 and 25 years or in people over the age of 70.

What is the treatment?

There are a variety of treatments depending on the type and extent of the lymphoma.

Treatment options include:

- watchful waiting—for some forms of slow-growing non-Hodgkin's lymphoma
- chemotherapy—anti-cancer cytotoxic drugs (tablets or injections)
- radiotherapy—where X-rays are used to target cells in certain areas
- biological therapy (also called immunotherapy)—where sophisticated antibodies are used in combination with chemotherapy
- stem cell (or bone marrow) transplantation.

The treatment strategies are slightly different for the two main types of lymphoma. Some people need only one type of treatment. Others will need a combination.

What is the prognosis (outlook)?

Treatment for Hodgkin's lymphoma is often very successful, with high cure rates. The outlook continues to improve and it is one of the most curable forms of cancer. The cure rate tends to be highest in younger people.

Non-Hodgkin's lymphoma is also curable but can be more difficult to treat.

Newer treatments continue to be developed and the outlook improves accordingly.

Important points

- Lymphomas are a group of cancers involving the lymphatic system.
- Common symptoms including swelling of the lymph glands, malaise, weight loss and fever.
- The lymphomas, particularly Hodgkin's lymphoma, are very treatable conditions with excellent cure rates.

Melanoma

What is a melanoma?

A melanoma is the most dangerous type of skin cancer. It grows from special cells in the skin called melanocytes. A melanoma is usually brown or blackish in colour and looks like a freckle, mole or spot. Melanomas can begin in moles, but most begin in normal skin.

Who gets melanoma?

About 1 in 60 people will get melanoma. It is most common in younger people aged 15–40 years. The incidence of melanoma increases with age. The highest rates of melanoma are found in people aged 80 or over. People at increased risk are those with:

- several dark moles
- freckles
- fair white skin
- skin that reacts to sunlight (burns easily and does not tan)
- family history
- overexposure to ultraviolet radiation from the sun (especially in the first 15 years of life) and from other sources (e.g. solariums).

Why do they occur?

We do not know why all of them begin, but they are much more likely to occur in people who have a lot of exposure to the sun. Queenslanders have one of the highest rates of melanoma in the world. In spite of this, melanomas do not occur only in areas exposed to the sun—they can occur all over the body.

Where do melanomas occur?

They can occur anywhere on the body but particularly in parts exposed to the sun. They are more common on the legs in women and the back in men. They can also occur in places not exposed to sun (e.g. the retina of the eye).

How do I know if I have a melanoma?

The first sign is a new, unusual spot or a change in an existing mole or freckle. Only a few moles go on to become

melanomas. Any changes that occur in a mole should raise suspicion. Changes may include:

- any change in the colour of the mole or freckle with a range of colours—brown, black, red, blue, white
- an increase in size, or spread to surrounding skin
- a change in the edge from smooth to irregular
- thickening of the mole
- bleeding
- itching

In fact, any change in a mole or freckle may be a warning, and should be discussed with your doctor.

What can be done?

The mole should be checked by your doctor. If melanoma is suspected, it should be referred to a specialist clinic or removed by an experienced doctor. It will then be sent away to be looked at under a microscope, to check if it is a melanoma. Further treatment depends on the result of this test.

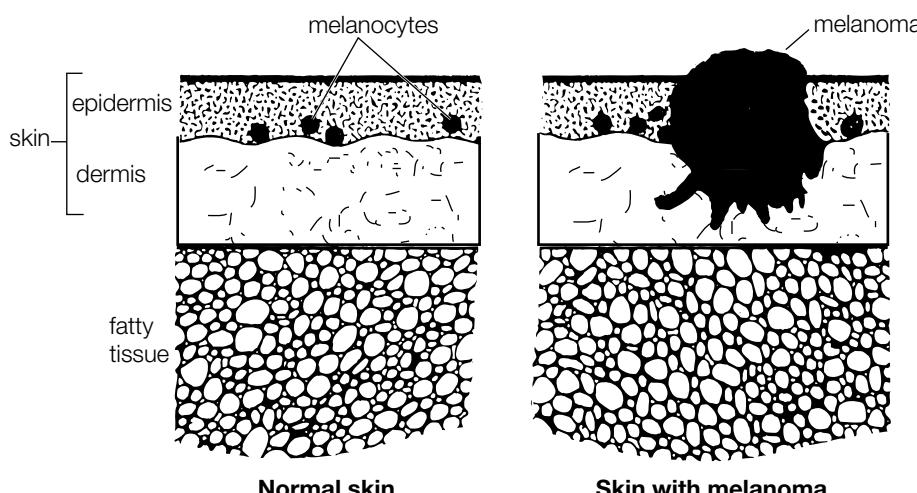
Can it be cured?

If melanomas are removed early, they can be completely cured. Over 95% of patients are cured with early removal. Once treated, regular skin checks are recommended.

Prevention is the best cure!

To decrease your chances of getting a melanoma, you should protect yourself from the sun. Best practice is a sunscreen and adequate protective clothing. These rules should be followed:

- Try to avoid direct sunlight when the sun is strongest (from 10 am to 3 pm standard time, or from 11 am to 4 pm daylight saving time), particularly in summer.
- Always wear a broad-brimmed hat and T-shirt or preferably long sleeves in the sun.
- Use an SPF factor 30 or more sunscreen on exposed skin and renew it regularly.
- Tanning is a sign of sun damage and increases your chances of getting a melanoma, so you should avoid it.



Ménière's syndrome

What is Ménière's syndrome?

Ménière's syndrome is a disorder of the balance system in the ear, causing attacks of severe dizziness and other unpleasant symptoms. It was described by a French physician, Prosper Ménière, in the nineteenth century.

What are the symptoms of the attacks?

- Vertigo (dizziness), lasting for minutes or hours
- Tinnitus (ringing or buzzing in the ear)
- A fullness or pressure in the ear
- Nausea and vomiting
- Loss of balance
- Sweating and pallor

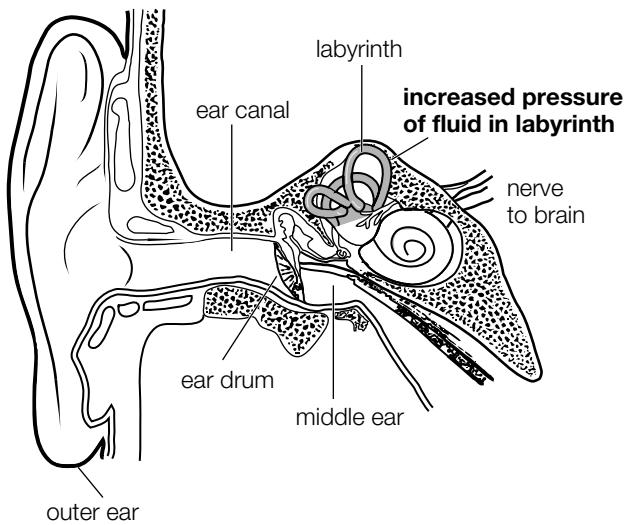
In most cases only one ear is affected.

Attacks come on suddenly and may even cause the person to fall over. The attacks usually last from 30 minutes to several hours. They may come on from as often as twice a week (unusual) or twice a month to as few as one every year or so.

What is the cause?

The cause is an increase in the amount (and therefore pressure) of fluid in the labyrinth of the ear. The cause of this is unknown but certain risk factors are:

- tension or stress
- high-salt diet
- noise
- head injury
- aspirin in high doses
- allergies (e.g. to alcohol, chocolate, dairy products)
- otosclerosis (a bone-conduction deafness).



The cause of an attack in Ménière's syndrome

Who is usually affected?

It is equally common in both sexes and usually affects adults between the ages of 30 and 60. It is uncommon, affecting only 1 person per 1000.

What are the risks?

It is not a life-threatening condition. Many cases are mild, but in the few people that have many attacks, complete deafness and persistent tinnitus can develop over time. In these people it can be frustrating to treat and can cause them embarrassment, loss of confidence, tension and anxiety, especially as the attacks come without warning.

How is Ménière's syndrome managed?

You will need to have special diagnostic tests, mainly to check your hearing and the condition of the labyrinth. There is no absolute cure at present, so treatment focuses on managing the symptoms and preventing or decreasing further attacks.

During the attack:

- Rest quietly.
- Avoid sudden changes in position.
- Do not read.
- Avoid glaring lights or other known trigger factors (e.g. watching TV).
- Do not walk without assistance if unbalanced.
- Do not climb ladders, drive or work around dangerous situations.
- Take medicines as ordered; however, you may require an injection.

Preventive measures include:

- Avoid caffeine, smoking and alcohol.
- Have a low-fat, low-salt diet.
- Seek out stress management/meditation classes.

You may be prescribed diuretics (fluid tablets) or special tranquillisers. Rarely surgery can be used for severe cases.

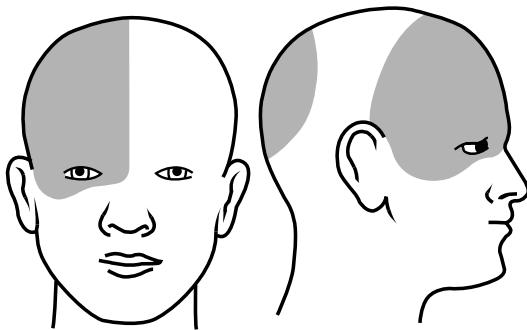
Seek out a support group, such as Ménière's Australia Inc., www.menieres.org.au.

Migraine

What is migraine?

Migraine or the ‘sick headache’ is derived from the Greek word meaning ‘pain involving half of the head’. It is a common problem that affects about 1 person in 10. It is more common in females and is worse between the ages of 20 and 50 years. It tends to run in families.

Famous people said to have suffered from migraine include Julius Caesar, Elvis Presley, Charles Darwin, Karl Marx and Tchaikovsky.



Typical site of pain in migraine (right side)

What are the symptoms?

Migraine can take several different forms, but the headache is usually preceded by altered vision followed by nausea and vomiting. This is called classic migraine. Another type is common migraine, which does not have the so-called ‘aura’ of altered vision but has headache with nausea and vomiting. Other symptoms include sensitivity to light, sound and smells. Children may have recurrent abdominal pain rather than a headache, and can suffer an attack even as early as 6 months of age. The length of each attack is variable, but an attack usually lasts for several hours.

What is the cause?

Migraine is caused by dilation or swelling of blood vessels inside and outside the scalp in people who have very sensitive blood vessels. This results in more blood pumping through the vessels, causing a throbbing sensation like blood to an infected sore on a finger. Hence it is also called vascular headache.

Trigger factors

Certain factors—emotional, dietary, environmental, or medicinal—are believed to trigger a migraine. They include:

- Tension and stress
- Emotion and excitement
- Unpleasant smells
- Certain foods, such as cheese, oranges, tomatoes, chocolates and wines, especially red wine
- Food additives such as monosodium glutamate ('Asian food headache'), sodium nitrite ('hot dog headache') and tyramine
- Fatigue and lack of sleep
- Hunger
- Constant physical stress
- Hormonal changes: just before menses or when taking the pill
- Bright lights, glare and flickering lights (e.g. TV)
- Changes in the weather
- Excessive noise

- Strong perfume
- Head trauma (e.g. jarring can cause ‘footballer’s migraine’)
- Travel
- Dehydration
- Caffeine (in some people)

What is the treatment?

There is no cure, but your problem can be considerably improved. Try to think deeply after each attack about what may have caused it—what you were doing, feeling, eating or drinking beforehand.

Some people find their attacks are related to neck problems. If you have such a problem, see your doctor. Cervical (neck) mobilisation or manipulation may help.

Prevention

- Adopt a healthy lifestyle.
- Avoid trigger factors: tension, fatigue, constant physical and mental stress.
- Restrict items in your diet that you suspect trigger the problem.
- Relaxation techniques, including meditation, may help prevent the attack. It is worth entering a meditation or yoga program.
- Medication may be necessary to prevent attacks and may be prescribed by your doctor.

Actual attack

You may be able to fend off the attack or modify it by taking 2 or 3 soluble aspirin or paracetamol tablets and an anti-emetic to relieve nausea (has to be prescribed), lying in a quiet, darkened, cool room and trying to relax, maybe meditating or listening to your favourite, soft, relaxing music. Another tip is to drink 1 litre of fluid (water or a low-energy sports drink) over 20 minutes.

If painkillers such as aspirin or paracetamol are not enough to relieve the symptoms, your doctor may prescribe triptan medications, such as sumatriptan. These drugs cause the blood vessels around the brain to contract, reversing the dilation of the blood vessels that is thought to happen when a migraine occurs. They are available as tablets, injections or nasal sprays. Take them (as prescribed) as soon as you suspect an attack is going to occur. The earlier you start treatment at the beginning of an attack, the better.

Some people find quick relief from simply ‘sleeping off’ an attack. Doctors usually prescribe mild sleeping tablets for these people.

Other helpful points

- Place cold packs on your forehead or neck.
- Avoid moving around too much.
- Do not read or watch television.
- Keep a diary of your attack.

When to seek immediate help

- Unusually severe headache
- Weakness on one side of the body
- Loss of vision
- Speech disorder

Helpful website

Headache Australia: www.headacheaustralia.org.au

Nail disorders

What are the causes of nail disorders?

There are many disorders that can cause unsightly disfigurement of the toenails and fingernails but the most common are trauma and infection. Damage to the nail occurs from trauma (injury), and self-trauma due to people injuring their nails by excessive nail-biting, picking and over-cleaning.

Infection is a common cause, especially from fungal infections, which mainly involve the toenails but can affect the fingernails. An infection usually with bacteria of the skin folds surrounding the nail is also common and can become a chronic problem if the acute infection is not cured.

What is the outcome?

Damage to the nail from trauma, infection or disease can result in disfigurement, sometimes leading to permanent damage if the cause is not corrected. However, nails do heal well but take about 9 months to regrow.

What is nail lysis?

Nail lysis (onycholysis) refers to the loosening or separation of the hard nail plate from the underlying nail bed. 'Onycho' means nail and 'lysis' means breaking down. This lends itself to the collection of dirt and unwanted debris under the nail. It is the most common problem affecting fingernails and is caused by avoidable trauma.

Causes of nail lysis are:

- injury to the nail causing it to lift or tear
- injury from biting
- injury from habit picking
- over-obsessive cleaning and fiddling
- excessive manicuring, especially of cuticles
- resins in polishes
- nail glues causing distortion.

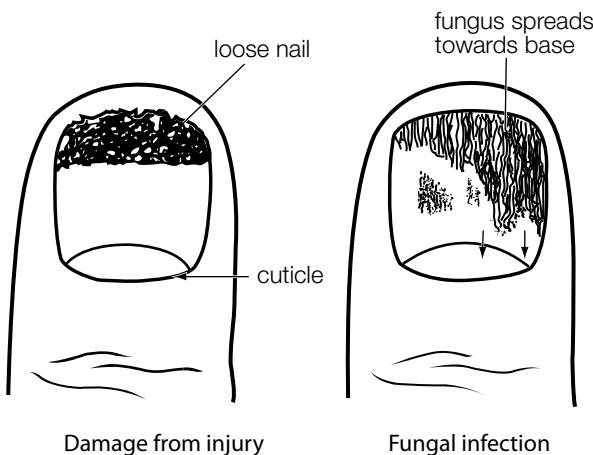
The effect is that the nail lifts at its end allowing access of air and debris from the outside. Dirt and grit, keratin (dead skin) and chemicals get under the nail, causing discolouration and further damage to the nail.

What is the cause of brittle nails?

Brittle nails are a problem of older people, especially women, caused by frequent contact with water and chemicals, particularly detergents, alkalis, kitchen cleaners and nail polish removers. Deficiency of iron and vitamins (not calcium) in the diet may also be a factor.

What is paronychia?

Paronychia is an infection of the skin folds surrounding the nail. Acute painful paronychia, which is usually caused by the bacterium *Staphylococcus aureus*, often leads to a blister of pus (often called a whitlow) along the nail.



What is onychomycosis?

Onychomycosis is a fungal infection of the nail. It is a common problem of toenails which becomes more common as we grow older. Heat and humidity (the result of wearing shoes) are also factors. It is usually associated with tinea of the feet. If it is suspected your doctor will take scrapings of the nails for laboratory examination.

What is the treatment?

General fingernail hygiene

- Keep nails short.
- Keep hands dry (avoid wet work, particularly immersion in dishwater).
- Wear cotton-lined gloves (for maximum 15 minutes) when washing dishes.
- Wear heavy-duty cotton gloves in the garden.
- Dry the insides of gloves after use.
- Avoid unnecessary soaps and detergents, solvents and other irritants (all soaps are irritants).
- Use a mild soap and shampoo for bathing and washing.
- For nail lysis apply tape such as Micropore over the free edge for months, until healed.
- Never pick, push back or manicure cuticles.
- Never insert anything beneath the cuticle for cleaning.
- Leave hangnails alone—never pull them off.

General toenail hygiene

- Improve footwear to avoid any rubbing over the nails.
- Treat any tinea of the feet with an antifungal agent as soon as it is noticed.
- Keep the feet as clean and dry as possible, including wearing well-ventilated sandals or open shoes.

Medical treatment

Your doctor will give medication according to the cause; it may be topical in the form of a cream or a lotion. Fungal infections of the nail usually require a long course of anti-fungal tablets for several weeks.

Nose: stuffy, running nose

What is the cause?

Your nose is lined by a delicate tissue called mucosa, which produces mucus to protect your nose. If this tissue is irritated, it becomes inflamed and swells up, causing blockage and a lot of mucus.

This is most commonly caused by a viral infection. Other causes are allergies and dust. Bacterial infection may then develop, and this tends to cause yellowish-green mucus and sometimes pain.

What are the symptoms?

The most common symptoms are profuse mucus (running nose) and stuffiness that may cause you to breathe through the mouth.

What are the complications?

Complications include nose bleeding, ear pain and sinusitis.

What is the treatment?

Blowing the nose

Clear excess mucus by blowing into a clean handkerchief or disposable paper tissue. First clear one nostril, keeping the other closed by gently pressing on its side. Then repeat for the other nostril. A common mistake is to press both nostrils almost closed as you blow. This forces air and mucus inwards, causing ear troubles.

Nasal decongestants

These over-the-counter preparations may help but should be used with care. These sprays or drops are designed to shrink and dry out the swollen mucosa, but can cause a 'rebound' reaction and eventually make the problem worse. If necessary, use these for a short period of 2 to 3 days only, and never exceed the maximum dose advised on the packet. Simple cold-soothing 'lollies' containing menthol can be just as effective.



A good method of steam inhalation

Steam inhalation

Steam inhalation is a simple and excellent way of clearing the nose cavities and sinuses. There are several preparations (such as Friar's balsam, Vicks VapoRub or other menthol substances) that can be dissolved in hot water. Add 1 teaspoon of the inhalant to 500 mL of very hot steamy water (just about 10 minutes off the boil) in an old container such as a wide-mouthed bottle or plastic container. Rather than using the old-fashioned method of a towel over the head, use a paper cone or a vacuum (Thermos) flask to direct the vapour to the nose and mouth.

Inhale the vapour slowly and deeply through the nose, and then exhale slowly through the mouth. Do this for 5 to 10 minutes 3 times a day, including before going to bed (the most important time). When you finish the inhalation, blow your nose as described.

Caution: Steam inhalations should be avoided in children because burns from hot water have been a problem.

Nosebleed

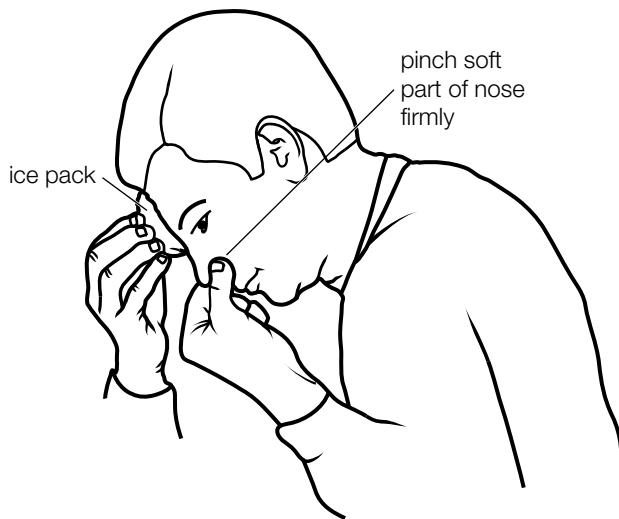
What causes nosebleeds?

Nose bleeding (epistaxis) occurs from the tiny veins that are just under the thin surface of the middle or central part of the nose. The nasal lining has lots of blood vessels, which help to warm the air entering the nose. This tissue is rather fragile and easily damaged by infections, including colds, and by injury. A crust that usually forms over the surface is meant to help healing but comes off easily through picking the nose or sneezing. The blood vessels then bleed easily, but a blood clot forms after a few minutes to seal the bleeding vein.

What are the features of nosebleeds?

The bleeding usually occurs quite suddenly and from only one nostril. It may occur only once or twice, but can occur many times over weeks. As a rule it just happens 'out of the blue' without any injury. Only a small amount of blood is usually lost before bleeding stops. Nose bleeding can affect all ages but is twice as common in children.

It helps to have someone apply an ice pack to the bridge of your nose, but the pressure you apply with your fingers is more important as it allows a blood clot to form.



What are the risks?

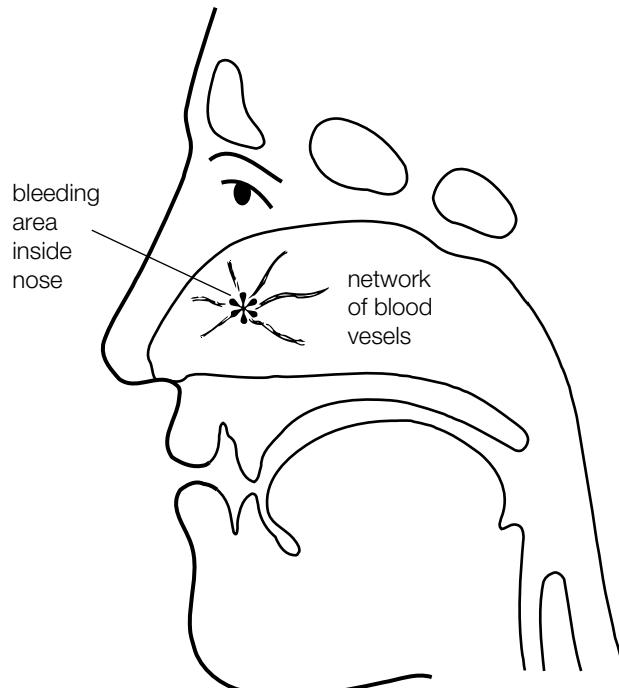
There is rarely cause for concern as it is usually a passing problem confined to the nose only. Sometimes in the elderly bleeding can occur from the back of the nose, and this can be a major problem. Sometimes nose bleeding can be caused by a generalised bleeding disorder, but there is usually unusual bleeding elsewhere in the body.

What is the treatment?

Self-help

You can stop virtually all nosebleeds yourself with a simple method.

- Sit down and bend your head forward. Hold a bowl under your nose.
- Firmly pinch the lower soft part of your nose between your thumb and finger for 5 minutes non-stop. Breathe through your mouth and do not let go for 5 minutes.



Rules

- Do not blow your nose for about 12 hours afterwards, as it may dislodge the clot.
- Avoid picking your nose.
- If bleeding stops then recurs, pinch your nose for 10 minutes.
- Try to avoid swallowing the blood.
- If bleeding continues after 20 minutes or more, report to your doctor or nearest emergency department.

Medical help

If the bleeding keeps coming back, your doctor can do many things to stop the bleeding such as:

- special gauze packing
- cauterising with a special chemical or diathermy
- applying an ointment with an antiseptic or a chemical that constricts blood vessels.

Obstructive sleep apnoea

What is obstructive sleep apnoea (OSA)?

OSA is slow or absent breathing (apnoea) for short periods of 10 seconds or more while sleeping. These periods of apnoea can occur many times during the night so that an observer, who is often alarmed by the problem, will notice normal breathing slow down and then stop completely. The sleeper then struggles to breathe, makes a choking or spluttering noise and resumes breathing. The cycle then repeats itself.

What are the symptoms?

The sufferer has periods of absent breathing as described above but is not aware of it. He or she wakes feeling unrefreshed, tired and in need of more sleep. Other symptoms may include irritability, morning headache, poor concentration, general loss of interest and sexual dysfunction.

Who gets OSA?

It is more common in middle-aged men who are overweight. Women can also get OSA but usually after menopause. People with different anatomical structures that cause narrowing of the back of the throat are at risk. This includes a large tongue, a small jaw, a blocked nose, and large tonsils and uvula. Hypothyroidism is another cause.

What is the cause of OSA?

It is basically a physical problem, especially in obese patients, when the soft tissue such as the floppy part of the soft palate flops against the back of the throat. This obstructs the free flow of air into the air passage. Aggravating factors are medications and alcohol, especially in the evening. Sometimes the cause is unknown but some people with illnesses of the lungs and nervous system can get it.

What are the risks?

OSA can be life threatening. Increased daytime drowsiness leads to increased road and workplace accidents. If prolonged, it is a risk factor for heart problems and stroke.

How are people tested for OSA?

The observations of the sleeping partner are very important. However, the best test is overnight admission to a sleep disorder clinic where a computer records sleep patterns, air flow and brain activity.

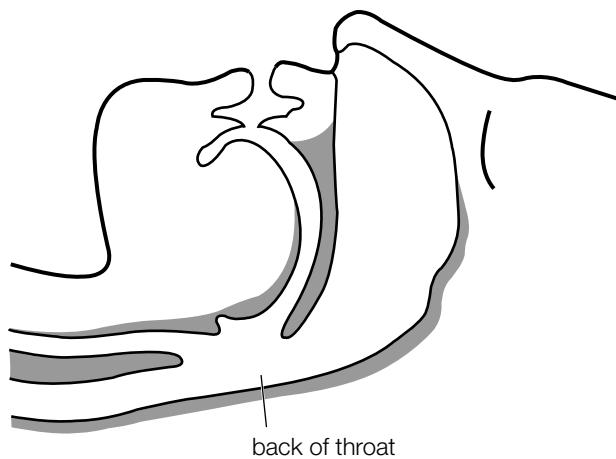
What is the treatment?

OSA is a difficult problem to treat but simple measures can help. These include:

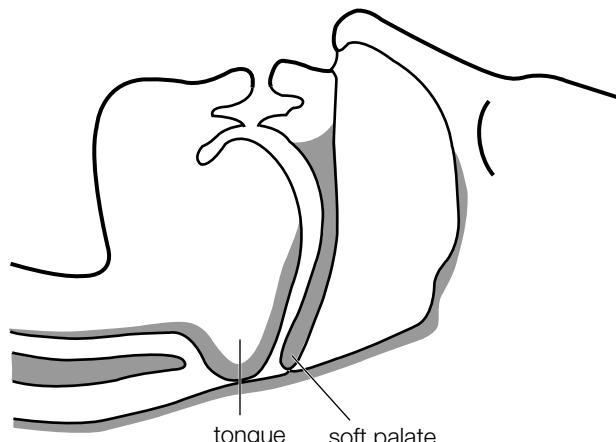
- Lose weight if overweight—even a small amount can help.
- Get physically fit with regular exercise.
- Avoid sleeping tablets and tranquillisers.
- Avoid alcohol for up to 3 hours before going to sleep.

- Use a short course of nasal decongestants for nasal congestion.
- Avoid sleeping on your back.

Corrective surgery for any obstruction to the airflow from the nose to the back of the throat can help those affected. The most effective treatment currently available for severe cases is CPAP. If this is not tolerated, a special mouthguard can be used.



Normal airway when sleeping



Obstructed airway when sleeping (sleep apnoea)

What is CPAP?

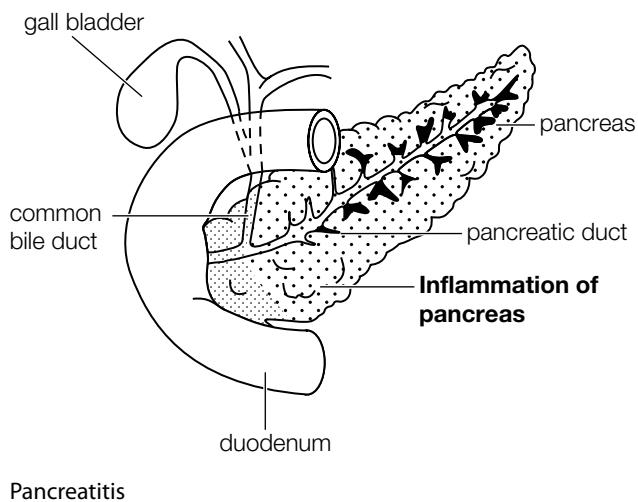
CPAP, which stands for 'continuous positive airway pressure', is the most widely used treatment for OSA. The affected person wears a close-fitting mask over the nose during sleep while a small air compressor forces air under low pressure into the upper airways to keep them open.

Pancreatitis

What is the pancreas?

The pancreas is an important organ that lies deep behind the stomach and intestines in the upper abdomen. It has two main functions to ensure good health:

- Production of digestive juice that contains chemicals called enzymes, which digest (break down) carbohydrates, fats and proteins in food. This allows the food to be absorbed as smaller molecules through the walls of the intestine. The pancreatic juice is ‘activated’ once it passes into the duodenum. The juice exits through the pancreatic duct.
- Production of the hormones insulin and glucagon, which pass directly into the bloodstream to regulate blood sugar. A deficiency of insulin will cause diabetes.



Pancreatitis

What is pancreatitis?

Pancreatitis is inflammation of the pancreas.

There are two distinct types of pancreatitis—acute and chronic.

- Acute pancreatitis develops quickly and the patient usually presents with severe abdominal pain. It may be a one-off condition that settles with no permanent damage, but it can be serious. If the inflammation persists, it may develop into chronic pancreatitis.
- Chronic pancreatitis occurs when the pancreas does not completely recover between acute attacks and becomes scarred and damaged.

What are the symptoms of acute pancreatitis?

- Abdominal pain—severe, often agonising, pain in the upper abdomen (epigastrium). It builds up over an hour or so about 12 hours after a large meal or a heavy bout of drinking alcohol. The pain usually bores through to the back and up into the lower chest. It may last for hours or days.
- Vomiting and retching
- Fever and/or sweating
- Feeling unwell and weakness

Acute pancreatitis is diagnosed by blood tests and X-rays.

What are the causes of acute pancreatitis?

The condition is not fully understood but the inflammation is caused by leakage of irritating pancreatic juices into the

pancreas. The juices become ‘activated’ and destructive to the tissues of the pancreas itself. Gallstones or alcohol cause more than 80% of cases.

- Gallstones: At least 50% of people already have gallstones. The stones may get stuck in the bile duct and pancreatic duct.
- Alcohol: Some people are sensitive to the effects of alcohol, especially after a heavy drinking session.

Uncommon causes include mumps, invasive cancers and trauma.

No cause is found in about 1 in 10 cases but a factor could be tiny gallstones or ‘gallstone sludge’ in the duct system.

What are the risks of acute pancreatitis?

Although most people fully recover, there is a danger that a severe attack of acute pancreatitis can cause death.

What is the treatment for acute pancreatitis?

The person experiencing pancreatitis is normally admitted to hospital where fluids, nutrients and strong painkillers are usually given via an IV drip. Treatment of the pain is a priority. The stomach is kept empty by stopping food and drink and the use of a tube passed from the nose into the stomach.

There is no simple treatment for the inflammation. Gallstones, if present, should be removed, especially if they block the pancreatic duct. Alcohol must be avoided. If a high blood fat level is present, it should also be treated.

What is chronic pancreatitis?

Chronic pancreatitis of the pancreas is uncommon and usually takes a long time to develop. It may follow recurrent attacks of acute pancreatitis or it may develop over time with long-term excessive alcohol drinking, which is the most common associated factor. It may also be associated with cystic fibrosis.

What are the symptoms of chronic pancreatitis?

- Abdominal and/or back pain, often after meals. The pain is aching or gnawing and may be stabbing. It may be intermittent or constant. About 1 in 10 people with chronic pancreatitis have no pain
- Nausea and vomiting
- Weight loss
- Mild jaundice
- Greasy, bulky stools (steatorrhoea)

Eventually the pancreas is unable to make insulin and diabetes develops.

Treatment will include taking insulin by injection and pancreatic enzymes by mouth to help the body digest food and allow you to gain weight.

Prevention of pancreatitis

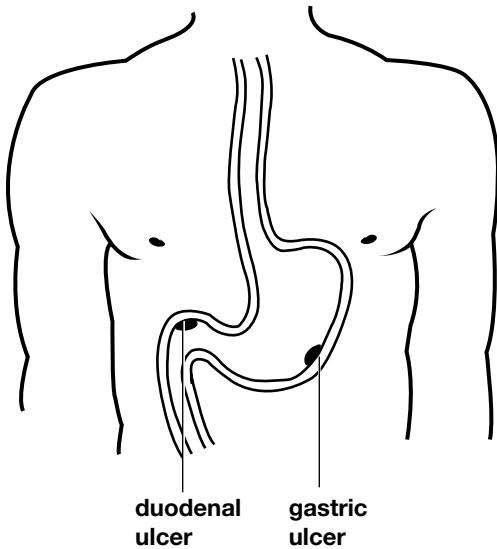
- Surgical removal of the gall bladder (if stones are present)
- A good, low-fat, nutritious diet with ample water intake
- Abstinence from drinking alcohol
- Treatment of high blood fat levels

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Peptic ulcer

What is a peptic ulcer?

A peptic ulcer is a raw area or small hole in the lining of the stomach or the duodenum (the first part of the small intestine). Most ulcers occur in the duodenum (duodenal ulcers); a smaller number develop in the stomach (gastric ulcers).



What causes a peptic ulcer?

Gastric juice produced by the lining of the stomach contains acid and an enzyme (called pepsin) that digests protein in our food. This acidic juice can cause an erosion of the lining of the stomach or duodenum, if it is excessive. This lining is normally protected by a layer of thick mucus, like a coating of slime. Once it is broken, the raw area of an ulcer can form. It is now known that bacteria in the stomach called *Helicobacter pylori* (*H. pylori*) are associated with or responsible for this breakdown.

A common modern cause is the use of drugs to treat pain and arthritis, known as non-steroidal anti-inflammatory drugs (NSAIDs).

Helicobacter pylori

H. pylori is a bacterium that resides on the inside lining of the stomach. It has the ability to cause inflammation of the stomach and duodenum, leading to peptic ulcers and gastritis. About 40% of the population over 40 years of age are infected with it but many have no problems. If proved to be present with an ulcer it needs to be eradicated with a combination of drugs (usually two antibiotics and an ulcer-healing agent) for 7 to 14 days. An 80 to 90% eradication can be expected.

What are the symptoms?

Common symptoms are:

- upper abdominal pain (just under the ribs)
- heartburn or indigestion
- 'hunger pain' when the stomach is empty (between meals and at night)
- pain relieved by antacids and milk.

Uncommon symptoms are:

- back pain (between the shoulder blades)
 - bleeding—vomiting blood and blood in bowel motions.
- The diagnosis is confirmed by gastroscopy (placing a tube into the stomach) and the *H. pylori* test.

Who is prone to ulcers?

Ulcers are common in:

- men
- young to middle-aged adults
- those who constantly take certain drugs (e.g. aspirin, cortisone, NSAIDS)
- heavy smokers
- heavy alcohol drinkers (possible)
- those who suffer constant stress and anxiety
- those with a family history and blood group O (associations).

What are the risks?

Most ulcers are relatively easy to cure or control. Bleeding can result in anaemia or can be sudden, and this is an emergency. Perforation or blockage of the duodenum can occur. Cancer rarely occurs with a gastric ulcer.

What is the treatment?

Self-help

- Do not smoke.
- Drink alcohol only in moderation.
- Do not swallow aspirin or anti-arthritis drugs unless really necessary.
- Follow a normal healthy diet with 3 balanced meals a day.
- Do not skip meals, eat irregularly or have late-night snacks.
- Avoid any foods that make your symptoms worse.
- Continue your normal activities, but aim for a non-stressful lifestyle.
- Take antacid tablets or medicines to relieve your symptoms.

Medical help

Your ulcer problem should be managed with the advice of your doctor. Antacids may not be enough, and special drugs are now available to heal ulcers. These modern drugs reduce the output of gastric juice and counteract *Helicobacter pylori* (usually with triple therapy), and need to be taken exactly as instructed. If all these things fail, an operation can be very successful.

Note

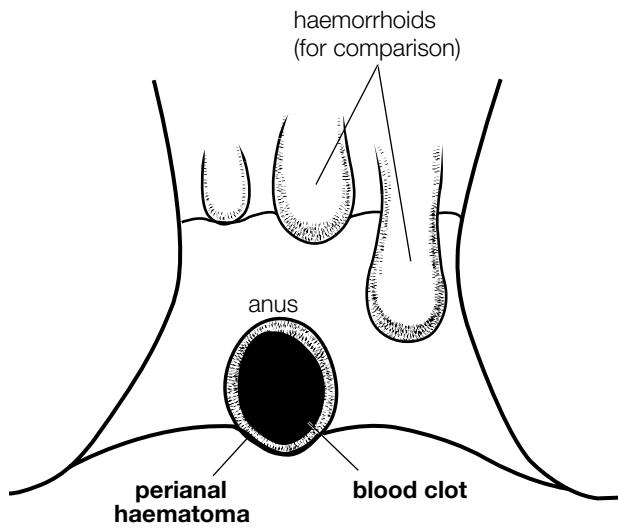
- Peptic ulcers are now very treatable with excellent modern drugs, and so any suffering should not be necessary.
- Report any sudden severe stomach pain or vomiting or passing of blood.

Perianal haematoma

What is a perianal haematoma?

Haematoma means ‘a collection of blood’ and peri means ‘around’ so a perianal haematoma is a small collection of blood that develops just outside and around the opening of the anus.

It is sometimes referred to as an external pile, a thrombotic pile or an external haemorrhoid, but strictly speaking it is not a haemorrhoid, which is a collection of blood arising inside the anus.



What are the symptoms?

- Pain, which varies from mild to severe
- Feeling of a lump at the anus
- Bleeding—small flecks of blood occur sometimes

The pain, which usually comes on suddenly, seems out of proportion to such a small lump, but the area around the anus is very sensitive.

What aggravates the symptoms?

The pain is worse on sitting, walking and opening the bowels.

What does it look like?

It looks like a small purplish swelling at the anus, rather like a semi-ripe blackcurrant. It is about the size of the fingernail of the little finger and is tender to touch.

What is the cause of perianal haematoma?

The cause is a rupture of a small vein that drains blood from the anus, which has a very rich blood supply. This rupture

may be brought on by straining at the toilet, coughing, sneezing or lifting a heavy object.

At first there is a very small collection of blood under the skin, but after a couple of hours it forms into a small firm clot.

What factors predispose to perianal haematoma?

The following are known factors but sometimes it just occurs for no clear reason:

- constipation
- sitting for long periods (e.g. truck drivers)
- heavy lifting
- pregnancy.

What is the risk?

It is not a serious problem—it has been described as a 5-day, painful, self-curing lump. However, if it is not treated early by removing the blood or clot, it can heal to leave an extra lump of skin called a skin tag, which can be annoying and irritating.

What is the management?

Take simple analgesics such as paracetamol for the pain. The haematoma can subside spontaneously and feel quite comfortable in 4 or 5 days. Ointments applied topically can give some relief but are generally not helpful and don't seem to shrink the lump.

Removal under local anaesthesia

Doctors usually try to evacuate the blood or clot, as this gives rapid relief and prevents the formation of the skin tag. If seen within a few hours of its onset, it may be possible to drain the blood with a needle and syringe. Once a clot has formed it is removed simply by a small incision over the lump under local anaesthetic. The wound is not stitched and heals very well, but care has to be taken with bleeding through the wound.

How can it be prevented?

Perianal haematomas and haemorrhoids can be prevented by keeping the bowels regular, so that constipation and straining to open the bowels is avoided. Train yourself to have a diet with adequate fibre by eating plenty of fresh fruit, vegetables and wholegrain cereals or bran. Drink lots of water during the day and get plenty of exercise, such as a brisk walk for about 30 minutes each day. Aim for softish bulky faeces that you can pass easily without straining.

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Personality disorders

What is personality?

Personality is the distinctive personal characteristic of a person that identifies a unique recognisable individual. It includes one's mental and behavioural characteristics, which are determined by inherited (genetic) patterns and developed by continuing interaction with outside life influences. This includes family interactions, peer pressure and influential events plus personal drives.

What is a personality disorder?

A person can be said to have a personality disorder if his or her behaviour pattern does not adapt in an appropriate way to social conventions. This results in impaired social interaction and often leads to unhappiness and occupational failure. One characteristic is a consistent failure to adhere to accepted standards of behaviour, upsetting people who come into close contact with them. The disorder comes on in adolescence or early adulthood. There are a whole variety of personality disorders, which can be classified as follows:

- **Withdrawn** (referred to as odd or eccentric): Subtypes include paranoid and schizoid. Characteristics are suspicious, oversensitive, shy, detached, defensive, emotionally cold, humourless and argumentative.
- **Dependent** (referred to as anxious, fearful and inhibited): Subtypes include avoidant, dependent, obsessive-compulsive and passive-aggressive. Features are anxiety, self-consciousness, low self-esteem, passivity, avoidance of responsibility, indecisiveness, pedantry, procrastination, rigidity, fear of rejection and of failure.
- **Antisocial** (often referred to as sociopathic or psychopathic): See subtypes below. Main feature is a defective capacity for affection or feeling for others. Tend to be irresponsible, unable to hold down jobs and not capable of forming satisfactory relationships.

What is the value of understanding personality disorders?

Doctors need to understand personality disorders, but it is helpful for people to know about them and recognise the reasons behind the behaviour of some individuals, who can cause much grief in families, the workplace, the classroom, the streets and politics. Much of the apparent bizarre behaviour may be a call for help, as these sufferers may feel that they are dependent on others for their identity or may be afraid of being abandoned and totally rejected. These unfortunate individuals who tend to raise our ire and unknowingly demand rejection require professional help, as do their family and other carers.

What are the features and types of antisocial personality disorder?

A sociopathic person is by nature incapable of conforming to the restraints of the outside world. The antisocial group tends to come to the attention of doctors more frequently

because of demanding, manipulative, angry or aggressive behaviour. Although some sociopaths adapt and achieve success, most are inadequately adapted people who bumble along unhappily. Sadly many upset the social norms, as they become disturbed when frustrated and regularly break the rules of society. They become well known to the police and spend time in prison or under the care of the state. The estimated incidence of antisocial personality disorder is about 5 in 100 people.

The following are identifiable subtypes:

- **Antisocial ('mad dog')**: Unable to conform to social norms, impulsive, insensitive, callous, repeated criminal behaviour, reckless behaviour, liar, low frustration level, repeated physical fights or assaults, lack of remorse, promiscuous, usually starts in teens.
- **Histrionic (hysterical)**: Self-dramatic, egocentric, immature, vain, dependent, manipulative, easily bored, emotional scenes, inconsiderate, seductive, craves attention and excitement.
- **Narcissistic ('prima donna')**: Exhibitionist, morbid self-admiration, insensitive, craves and demands attention, exploits others, preoccupied with self-importance and power, lacks empathy and interest in others, bullying, no insight, arrogant and haughty attitudes.
- **Borderline ('hell raiser')**: Confused self-image, impulsive, 'all or nothing' relationships—unstable and intense, damaging reckless behaviour (e.g. driving), drug abuse, full of anger and guilt, lacks self-control, possible uncontrolled gambling or spending or sexual activity. Intense outbursts of anger, anxiety and depression. This group engages in frantic efforts to avoid abandonment and has a high incidence of suicide and apparent attempted suicide.

What can be done for antisocial personality disorder?

People with this unfortunate disorder need help. Because they tend to upset people and alienate friends and many others, they have difficulty finding support and treatment. The best treatment is from a supportive 'therapeutic' community and understanding and supportive professionals, particularly their general practitioner. Their families and other carers also need support and education.

These people may respond well to psychological intervention and behavioural techniques. These include:

- **psychotherapy**—especially cognitive behaviour therapy, which provides insight and various ways of coping
- **psychosocial rehabilitation**—helping to learn acceptable social skills.

Medication has limitations but is most useful to treat those individuals who develop an anxiety state, depression or a psychosis.

Where to get help

- Your general practitioner
- SANE Australia, telephone 1800 187 263

Phobias

What is a phobia?

A phobia is an abnormal fear of or aversion to a specific object or a certain situation. It is a type of anxiety disorder that can precipitate a panic attack. People with phobias tend to avoid these situations or objects and become anxious when they anticipate having to meet them. For example people may dread the sight or touch of a spider (arachnophobia) or have a morbid fear of heights (acrophobia). These types of fears do not usually prevent people leading a normal life; they avoid the subject of the fear. On the other hand, fear of confined spaces (claustrophobia) and fear of open spaces (agoraphobia) are more serious problems to cope with.

What are the three classifications of phobic states?

- Specific phobias: for example fear of spiders, snakes, dogs, toads or thunder
- Agoraphobia: fear of open spaces or public places
- Social phobias: fear of social gatherings

What are the most common phobias?

The 10 most common phobias (in order) are spiders, people and social situations, flying, open spaces, confined spaces, heights, cancer, thunderstorms, death and heart disease.

What is agoraphobia?

Fear of open spaces or public places is one of the most serious phobic disorders. Avoidance includes the many situations involving the issues of distance from home, crowding or confinement. Typical examples are travel or public transport, crowded shops or parklands. For some people, anywhere outside the house is a threat. They feel that they may lose control, faint or suffer embarrassment. Agoraphobia is commonly associated with depression and marital or family disharmony.

Typical specific phobias

Name of phobia	Fear of
acrophobia	heights
aichmophobia	needles/sharp objects
ailurophobia	cats
androphobia	men
anthropophobia	people
apiphobia	bees
aquaphobia	water
arachnophobia	spiders
astraphobia	lightning
aviatophobia	flying
brontophobia	thunder
bufonophobia	toads
cancerophobia	cancer
cardiophobia	heart disease
cynophobia	dogs
dentophobia	dentists
genophobia	sex
ergasiophobia	work

gynophobia	women
herpetophobia	creepy crawling things
homophobia	homosexuals
hypnophobia	going to sleep
iatrophobia	doctors
musophobia	mice
mysophobia	dirt, germs
necrophobia	death
neophobia	anything new
noctiphobia	night
nyctophobia	darkness
ophidiphobia	snakes
pyrophobia	fire
taphophobia	being buried alive
sociophobia	social situations
theophobia	God
xenophobia	strangers
zoophobia	animals

What is the outcome?

The problem is not as serious as you may believe. It can be treated readily. Most people lead a normal life, especially those with a specific phobia. Panic attacks, one of the most distressing problems, can also be treated.

What is the treatment?

Self-help

To counter a phobia it is good to discipline yourself to adjust to it gradually. This is called desensitisation or graded exposure. For example if agoraphobia makes you dread shopping, begin by visiting small local shops and then gradually move to larger shops until large shopping centres no longer seriously upset you.

Cognitive behaviour therapy

This counselling technique for more difficult problems is the method favoured by professionals. Cognitions are thoughts, and cognitive therapy involves the process of knowing or identifying, understanding or having insight into your thought processes. The first step is to be educated about the phobia—its cause, its outcome and how it can be handled. For example the cause may be an unpleasant childhood experience based on misinformation, a scary movie or book, a painful accident or bullying at school. The behaviour component involves desensitisation in which an experienced therapist guides the sufferer through the mechanism of coping with their fear. It usually involves slow exposure to places and circumstances that frighten them and then positively reframing the awful thought processes that torment them. It can be compared with entering a cold sea gingerly, which is preferred to the shock tactic of plunging quickly into it. Good parts of therapy include relaxation techniques and group therapy where other people share their experiences. Positives are reinforced and negatives discounted. Sometimes specific medication may be prescribed. Discuss these issues with your doctor.

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Pityriasis rosea

What is pityriasis rosea?

Pityriasis rosea is a skin rash caused by a virus from the herpes virus family. It commonly occurs in children and young adults (especially aged 15 to 30) but might occur at any age. It is not considered to be contagious.

What are the symptoms?

The rash

The rash usually starts with a large spot on the trunk (chest and back) called a 'herald' patch because it heralds the onset of a widespread rash several days later. This patch can look like ringworm. The spots then break out over the body to cover the trunk and upper arms (a 'T-shirt' distribution) and the upper legs. The arrangement of the rash gives the appearance of a 'Christmas tree' and seems to follow the line of the ribs. Rarely, the rash can cover the neck and lower face. The spots become oval patches (about the size of a coin) of salmon-red or copper-coloured skin with scaly margins.

Other symptoms

Patients are not ill, although there may be discomfort from itching. Some patients have no itching at all, while some can have considerable itching.

What are the other features of pityriasis rosea?

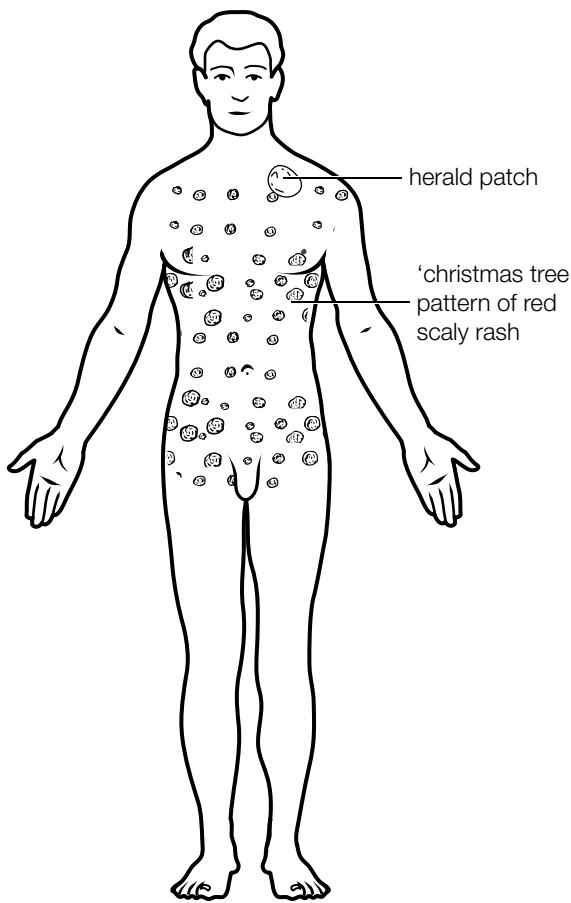
- It tends to be more common in females.
- It tends to be more common in autumn and spring.
- If the diagnosis is in doubt, a skin biopsy can be taken for laboratory diagnosis.
- The rash can vary from being only a few spots to being quite red and florid.

What are the risks?

There are no risks attached to pityriasis rosea, but you should visit your doctor to make sure that you do not have some other similar skin disorder such as ringworm. No scarring will result from the skin rash unless there is a complicating infection. People with dark skin may notice discoloured spots for a short time. The disorder does not seem to be particularly contagious and second attacks are rarely seen.

How long does the rash last?

Pityriasis rosea usually runs a natural course of 4 to 10 weeks and then clears up completely. There are no medicines or treatments available to shorten this course.



Typical distribution of the rash of pityriasis rosea

What is the treatment?

There is no special treatment for pityriasis rosea. You should lead your normal active life. If possible, expose the skin to moderate amounts of sunlight, as this tends to lessen the rash, but you must avoid sunburn. Otherwise, ultraviolet light therapy 3 times a week is helpful for more florid cases. Bathe and shower as usual; avoid normal soaps but use a mild soap such as Dove or Neutrogena, or bath oil. If itching is a bother, use some soothing moisturising lotions or creams. These include calamine lotion, calamine lotion with 1% phenol, menthol 1% in aqueous cream or urea cream. If itching is severe, your doctor will prescribe special medication that may include cortisone cream or tablets and antihistamines.

Post-traumatic stress disorder

What is post-traumatic stress disorder (PTSD)?

PTSD is a nervous condition that develops when a person has been involved in, or witnessed, a nightmarish traumatic event that threatens life or safety, usually a life-threatening assault. During the trauma the person's response is to feel intense fear, helplessness or horror. The condition results in recurring distressing memories, 'flashbacks' and other symptoms. It is a type of anxiety disorder.

Who gets PTSD?

The strict definition of PTSD is that it develops or persists more than 3 months after the event. Furthermore, the trauma you had or witnessed must be severe such as a severe accident, rape, a life-threatening assault, torture, armed hold-up, natural disaster (e.g. bushfire) or seeing someone killed. However, symptoms similar to PTSD develop in some people after less severe traumatic events.

It is estimated that up to 1 in 20 people will experience PTSD at some stage in life. It is much more common in certain groups of people. Some studies have found that PTSD develops in about:

- 1 in 5 fire-fighters
- 1 in 3 teenage survivors of car crashes
- 1 in 2 female rape victims
- 2 in 3 prisoners of war.

The majority of cases are war related.

What are the symptoms?

In some people PTSD develops immediately after the trauma and we refer to it as an acute stress disorder, but in some the symptoms develop several months or even years later. The symptoms vary and include intrusive memories, numbing symptoms and increased arousal. Some specific symptoms are:

- flashbacks—re-experiencing the event
- numbed feelings
- avoidance of thoughts or conversations about the event
- distress on exposure to resembling events
- depression and/or anxiety
- difficulty sleeping—often due to distressing dreams
- over-sensitivity to noise, smells, sudden movements or other triggers for the memory (i.e. hyperarousal)
- poor concentration
- anger and rage

- feelings of guilt and shame
- moodiness.

What is the outlook?

It is normal to feel upset straight after a traumatic event. For many people the distress gradually eases. If you have PTSD the distressing feelings and symptoms persist. In some cases the symptoms last just a few months, and then ease or go. However, in many cases the symptoms persist long term and these people may have other psychological problems such as depression, anxiety, phobias, panic attacks or drug and alcohol problems.

What is the treatment?

It is important to obtain treatment to help achieve relief of symptoms, management of anger and improvement of social and family relationships and employment. However, no treatment will 'wipe the slate clean' and completely erase all memories of the trauma.

Treatment strategies:

- 'Debriefing': immediate counselling after the event
- Ongoing counselling
- Education to understand the condition
- Support groups by volunteers also experiencing PTSD
- Cognitive behaviour therapy (CBT)—under the guidance of a CBT therapist to promote positive thinking and an ability to face up openly to memories.

Medication

There is no special medication for PTSD but medication can help consequent problems such as depression, anxiety or panic attacks. Antidepressants in particular have a useful place in management of PTSD. However, it is best to cope through counselling, education, self-help measures and support networks.

Key points

- Acute stress disorder is an anxiety reaction within 4 weeks of the event and resolving within 4 weeks.
- Chronic PTSD is one lasting more than 3 months.
- Delayed PTSD is one occurring 6 months after the event.
- Main symptoms are vivid memories, avoiding reminders, being constantly on edge, and irritability.

Pressure sores (bed sores)

What are pressure sores?

Pressure sores, also called bed sores, pressure ulcers or decubitus ulcers, are areas of damaged skin caused by the constant pressure or friction of sitting or lying in one position for too long. They usually occur in elderly, immobile people, especially those who are unconscious, paralysed or debilitated.

Where do the sores usually occur?

They occur where bones are close to the skin and where there is little fat padding. This includes the heels, hips, ankles, back (sacrum and tailbone), elbows, shoulder blades and even the back of the head. The pressure on these sites reduces the blood supply to the skin, especially when change of position doesn't occur often enough, and this causes the sore to form.

What are the symptoms and signs?

A pressure sore starts off as a patch of tender, red, inflamed skin. The skin then becomes blue, purple or black and eventually breaks down to an ulcer as the skin undergoes necrosis (death). The progress from red skin to an ulcer can be very rapid without proper care.

What are the risk factors?

The risk is great in older people who are bedridden or sitting in a wheelchair for long periods. Their skin is thinner and more sensitive to a reduced blood supply. Other factors include:

- immobility, especially lying and sitting
- chronic medical illness (e.g. anaemia)
- diabetes
- poor nutrition
- poor mental condition
- incontinence
- poor care and support.

How are pressure sores treated?

Pressure sores can be prevented and this is the best treatment. If the patient is not paralysed they can still exercise and move around to support the weight on different parts of the body. Circulation is improved by regularly flexing the arms and legs, wriggling the toes, rotating the ankles, tightening and relaxing muscles, doing whole-body stretches and moving position regularly (hourly). If moving position is not possible, the person should be lifted at least every 2 hours. It is good to use lifting devices to move patients rather than dragging them over the mattress. A special bed and mattress such as an electrically driven ripple mattress is vital for bed-ridden patients. Other tips include:

- Keep skin relatively dry (not too dry—if so, use moisturisers) and clean.
- Avoid excessive moisture on the skin.
- Keep control of any incontinent urine and faeces—clean skin at time of soiling.

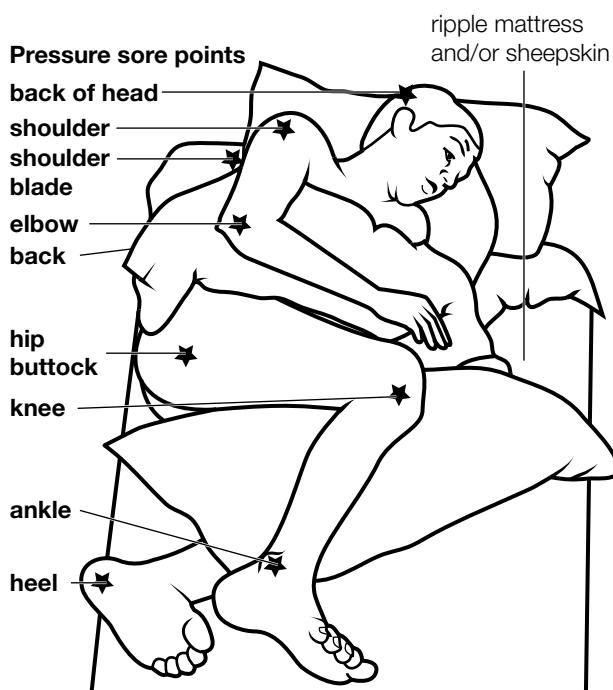
- Take special care of pressure areas—keep these clean and dry.
- Check skin daily for signs of redness and treat at first sign.
- If reddening, sponge with surgical spirit, cover with a soft dressing and keep the weight off the area for a few days.
- Place pillows between the skin and the bed, especially between the ankles.
- Consider a bed-cradle to raise the bedclothes.
- Keep sheets clean, tight (no wrinkles) and free of food scraps.
- Lie on 'sheepskin' (preferably synthetic and washable).
- Sheepskin boots can be used to protect the heels.
- Ensure good hygiene and nutrition.
- AVOID hot water, soap (can use a soap-free wash), doughnut cushions, massage to bony areas or the application of force or friction.

What is the treatment of pressure sores?

- Relieve the pressure that caused the sore.
- Follow the above guidelines.
- Improve nutrition.
- Some dietary supplements, for example vitamin C and zinc, may help promote healing.

Principles of treating the sore/ulcer

- Gently clean ulcer with a moist dressing such as saline.
- Keep the surrounding skin dry.
- Pack the ulcer with a modern dressing (according to the size and nature of the ulcer) that removes slough and promotes healing.



What is pruritus ani?

Pruritus ani simply means ‘itch of the anus’ or ‘itchy backside’. It is a very common disorder of the skin surrounding the anus. In children threadworms may be suspected; however, it is usually seen in adult males, often at times of stress and in hot weather when sweating is excessive.

What are the causes and aggravating factors?

It can be caused or aggravated by:

- medical problems such as eczema, threadworms, antibiotic treatment, diabetes and fungal infection
- tinea cruris or ‘jock itch’, which has to be ruled out
- local anal disorders such as piles, fissures and warts
- poor hygiene (faecal soiling)
- excessive sweating (e.g. due to tight clothing such as pantyhose in summer)
- contact dermatitis caused by dyed or perfumed toilet tissue, soap, powders or clothing
- overwork, both physical and mental
- obesity.

Rules of treatment

1. Scratching

Stop—it’s taboo! If you scratch at night, wear light cotton gloves to bed.

2. Bathing

Avoid hot water. Excessive showering and scrubbing is also bad for this condition. Use a cream such as bland aqueous cream for cleaning rather than soap.

3. Drying

Keep the area as dry and cool as possible. After washing, dry gently and thoroughly with a soft towel or soft tissue: do not rub. Warm air from a hairdryer is very useful.

4. Bowel movements

Keep bowels regular and smooth by eating plenty of high-fibre foods such as bran, fresh carrots and apples. Some doctors claim that your bowel actions should be so smooth and complete that toilet paper should not be necessary.

5. Toilet

Clean gently after bowel movements. Use soft paper tissue (avoid pastel tints), then clean with tufts of cottonwool with aqueous cream or bland soap and water. The best way is to use cottonwool wetted with warm water only.

6. Soaps and powder

Do not use perfumed soaps or talcum powder, including baby powder. A neutral soap such as Dove or Neutrogena is preferable.

7. Clothing

Wear loose clothing and loose cotton underwear. In men, boxer shorts should be worn in preference to jockey shorts. Let the air circulate in the area. At times a skirt but no underpants (in women) is recommended. Avoid pantyhose if possible.

8. Topical creams

Do not use ointments or creams unless your doctor has prescribed them. If a cream has to be used, simple creams may be the most soothing (e.g. toilet lanoline).

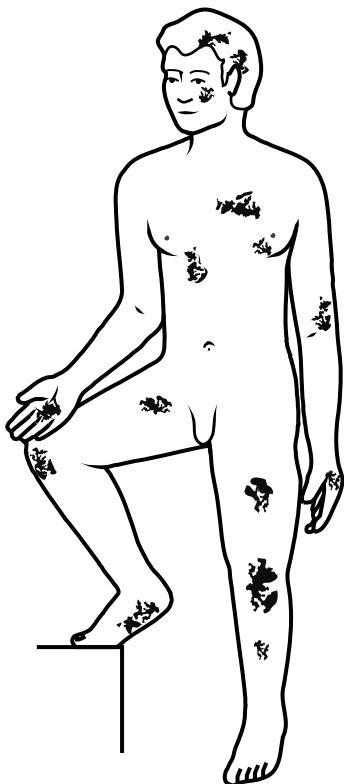
Seek your doctor’s advice before using over-the-counter prescriptions. Your doctor may prescribe a special cream such as hydrocortisone to help relieve inflammation and itching, and possibly antihistamine tablets to reduce itching.

Remember

Pruritus ani will certainly settle with this plan of treatment.

What is psoriasis?

Psoriasis is a chronic skin disorder in which red or deep pink raised patches covered by white scales (called plaque) appear on the skin. It usually causes no discomfort but it can get itchy, especially on the scalp or around the anus. The main problem is the unsightly appearance of the rash, but fortunately it is usually covered by clothing. You may have a single patch or several large ones. There are several forms of psoriasis but the common one is plaque psoriasis. The cause of psoriasis is not fully understood and it shows a tendency to run in families.



Common sites of psoriasis

What part of the body is usually affected?

Psoriasis commonly affects the elbows, knees, lower back and scalp, although patches can surface anywhere on the body, including under the nails of the fingers and toes. It occurs less commonly in the armpits, under the breasts, on the genitals and around the anus.

Is psoriasis common?

Yes; it affects about 1 in 40 people. There are two peaks of onset—late teens and in 50 year olds. In most cases it is mild but some people are more severely affected.

What is the cause?

Psoriasis is mainly caused by a change in the function of the immune system leading to inflammation, which stimulates

an increase in skin cell turnover. This results in thick, scaly areas and also dilation of blood vessels, which accounts for the typical salmon pink colour.

What are the precipitating (trigger) factors?

- Psychological/emotional stress
- Trauma and other physical stress
- Infection—various types especially Streptococcus
- Drugs (e.g. lithium, beta blockers, anti-inflammatories, alcohol)

Is it serious?

No; it does not usually affect general health. Some people (about 5% of those with psoriasis) can develop a painful arthritis in the joints, especially of the hand, back and large joints of the leg. This should be reported to your doctor.

How is psoriasis diagnosed?

A doctor can usually make a diagnosis on the appearance of the rash without the need for tests. If there is any doubt, a piece of skin can be removed for examination (a biopsy).

What are other important facts about psoriasis?

- It is worse in winter, due to the relative lack of sunlight.
- Yellow blisters can occur in patches on the soles and palms.
- It is most unlikely to appear on the face.
- It should not prevent you from enjoying a normal life.
- It can temporarily disappear, especially during summer.
- It can affect the nails and the joints.

What is the treatment?

There are many available treatment options. The majority of people will respond well to creams and ointments prescribed by their doctor. This may include coal tar creams, steroid creams or newer synthetic vitamin A (Zorac) or vitamin D (Daivorex) creams. Special shampoos and lotions may be needed for psoriasis of the scalp. Use soap substitutes for washing.

While sunlight can be helpful, the risk of sunburn and skin cancers has to be considered.

More extensive psoriasis that has not responded to creams requires specialist referral for consideration of UV therapy or of tablets or injections that boost the immune system.

Note

- Psoriasis is not an infection and is not contagious.
- No one has a cure for psoriasis—beware of quack ‘cures’.
- Avoid sunburn—it can make it worse.
- Treat dry, itchy skin and avoid scratching.

Raynaud's phenomenon

What is Raynaud's phenomenon?

Raynaud's phenomenon is a disorder of the circulation that affects the fingers and sometimes the toes. The small arteries that supply the digits become oversensitive to low temperatures and suddenly contract or spasm, reducing the blood flow to the affected digits. At first the contraction is only a temporary spasm and is eased by warmth, but it may eventually become permanent.

Lack of blood and therefore oxygen makes the digits go pale, often with a bluish tinge. When the spasm subsides, fresh blood returns and the pale digit becomes red.

What are the symptoms?

The main symptom is a sequential range of colour in the fingers (or other affected parts), which initially turn white (pallor) when exposed to cold or stress. This is followed by a bluish tinge and then redness. The colour changes are usually accompanied by discomfort (sometimes pain), tingling (pins and needles) and numbness. The thumb is not affected.

The severity of the condition can vary considerably and many people have a mild form that requires no treatment at all. In rare cases it may affect the ear, nose or nipple.

What are the causes of Raynaud's phenomenon?

There are several known causes of the condition. One well-known cause is the occupational trauma that results from handling vibrating tools. The medical conditions associated with the disorder include:

- scleroderma, lupus, rheumatoid arthritis and other connective tissue disorders
- side effects of drugs such as beta blockers, other anti-hypertensive agents, ergot preparations and nasal decongestants.

Your doctor will investigate for these secondary causes.

What might Raynaud's be confused with?

The condition should not be confused with the more common problem of diffusely cold or mottled hands that recover rapidly and evenly when warmed. Another variation is chilblains, which are itchy and have no pattern to the skin changes.

What is 'industrial white finger'?

This is a type of Raynaud's phenomenon that is brought on by working for prolonged periods with heavy machinery that vibrates forcefully, such as chainsaws or pneumatic drills. Some workers seem to be prone to the condition, but most are not affected. The condition can continue indefinitely even if the worker changes jobs.

What is Raynaud's disease?

When Raynaud's phenomenon occurs without any proven underlying disorder (as above) the condition is called Raynaud's disease. It appears spontaneously without known cause. The disorder tends to be hereditary but the condition is usually considerably milder in children.

How common is Raynaud's disease?

The condition is quite common. Although it can affect both sexes, about 9 out of 10 affected people are women. It almost always occurs for the first time in late teenage years or young adulthood. The problem often settles after the menopause in women.

What factors increase the risk?

- Smoking, which impairs circulation to the extremities
- Cold, wet weather
- Using heavy vibrating equipment
- Stress or emotional upset
- Drugs that cause spasm of the small arteries—take care with migraine and blood pressure drugs such as beta blockers

What is the treatment of Raynaud's disease?

Self-help and prevention

The best treatments are preventive. Learn to recognise factors that bring on an attack. In an attack it is best to warm the extremities gradually.

- Keep warm—aim for total body protection from the cold. Wear layered clothing to prevent heat loss. Use an electric blanket at night as required. Use mittens, fleece-lined gloves and thick woollen socks in comfortable, roomy shoes. Gloves or mittens should be worn when hands come in contact with cold surfaces and objects, such as frozen food. Move to a warm climate if possible.
- Avoid cigarette smoke—do not smoke and avoid exposure to others' cigarette smoke.
- Reduce aggravating physical activities—be mindful of common activities that place pressure on your fingers, such as typing, playing piano or keyboard, chopping food and using vibrating tools.

Medical help

Although most people simply learn to live and cope with Raynaud's phenomenon or disease, in certain cases doctors may be able to prescribe one of a limited number of medications to help with—but not cure—the problem.

Reflux disease

What is gastro-oesophageal reflux disease (GORD)?

GORD is the condition that describes the reflux of acid from the stomach up into the gullet (oesophagus). There is a band of muscle called a sphincter at the junction between the oesophagus and stomach. This muscle acts like a valve and allows food to pass down into the stomach; under normal circumstances it constricts and prevents food and acid leaking back up (refluxing) into the oesophagus. Reflux occurs when the sphincter fails to function properly.

What is oesophagitis?

Oesophagitis is inflammation of the lining of the oesophagus, which is usually caused by irritation from the reflux of acid from the stomach into the oesophagus.

What are the causes of reflux?

Often we do not know why the sphincter fails to prevent reflux, although sometimes the pressure in the stomach rises to a level that the sphincter cannot cope with, such as in pregnancy bending forward for a long period, especially after a heavy meal. A well-known cause is a hiatus hernia, where part of the stomach slips up into the oesophagus. People with a hiatus hernia are most likely to develop reflux. Aggravating factors include smoking, obesity, heavy drinking and increasing age.

What are the symptoms of reflux and oesophagitis?

- Heartburn, which is a burning feeling in the lower chest and upper abdomen, is common
- Nausea
- Pain in the upper abdomen (epigastrium) and chest
- Acid taste in mouth
- Bloating and belching
- Cough, especially at night, with possible asthma-like symptoms

The diagnosis may be confirmed by endoscopy, where a narrow flexible telescopic instrument is passed down the oesophagus into the stomach to examine these internal organs.

What are the risks or complications?

Risks are uncommon but include a stricture, which is a narrowing of the lower oesophagus from long-standing oesophagitis. Another concern is Barrett's oesophagus, where the cells in the lower oesophagus undergo change and have a small potential to develop into cancer.

What is the treatment?

Self-help

Many factors such as smoking, obesity, chocolate, alcohol, spicy foods and alcoholic drinks appear to relax the sphincter

muscle and increase the risk of acid reflux. So the main things you can do to help are:

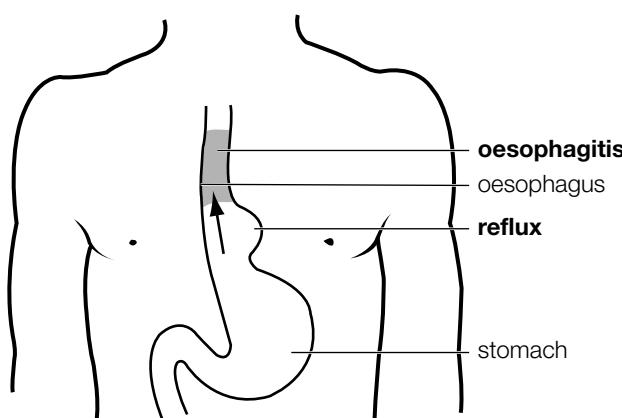
- Stop smoking.
- Avoid or take aggravating foods in moderation. This includes spicy foods, hot drinks and coffee especially later in the evening.
- Weight: keep to an ideal weight. If you are obese go on a diet to achieve an ideal weight.
- Posture: avoid lying down or bending forward a lot during the day.
- Bedtime: if symptoms occur most nights, try to go to bed with an empty, dry stomach; don't eat in the last 3 hours or drink alcohol in the last 2 hours before bedtime. Raising the head of the bed up to 10 to 15 cm will help prevent reflux during sleep.
- Medications: avoid medications that make the symptoms worse; examples are anti-inflammatories such as aspirin, ibuprofen and diclofenac, diazepam, nitrates and calcium channel blockers such as nifedipine.

Medical treatment

- Antacids: alkaline liquids or tablets that neutralise acid can rapidly relieve symptoms. They are ideal to use as required for infrequent and/or mild episodes of heartburn with reflux.
- Acid-suppressing medications: there are two groups of modern medications that are very effective in reducing the amount of acid that your stomach produces. Your doctor will advise on and prescribe the drug that is suitable for you.
- Prokinetic medicines: these medicines speed up the passage of food through the stomach and are very helpful if meals cause disturbing bloating, belching or a stuck food feeling.

Surgery

Surgery is an option if your reflux is bad, especially with a hiatus hernia. The operation, usually performed through a 'keyhole' in the stomach, aims to improve the sphincter effect of the lower oesophagus and prevent reflux.



Restless legs syndrome

What is restless legs syndrome (RLS)?

RLS, also known as Ekbom's syndrome, is a rather common movement disorder of the nervous system where the legs feel as though they want to exercise or move when the body is trying to rest. The major complaint of sufferers is of disruption both to sleep and of relaxing activities, such as watching television or reading a book. Prolonged car or plane travel can be difficult.

RLS is frequently an undiagnosed disorder because people often don't complain about it to their doctor. The diagnosis is made on the history—there are no special diagnostic tests.

Who gets RLS?

Anyone can get it and it is common. A Canadian study reported that 15% of people sampled reported 'leg restlessness at bedtime'.

Its prevalence increases with age so it mainly affects elderly people. Women are more prone to get RLS and it is aggravated by pregnancy. It tends to run in families.

What is the cause?

The exact cause of primary RLS is not clear but there appears to be a problem with the function of a chemical-transmitting substance in the central nervous system. It is not related to exercise and does not appear to follow strenuous exercise.

What are the medical conditions that can cause RLS?

Symptoms of RLS have been found to be associated with iron deficiency, anaemia, kidney failure (uraemia), hypothyroidism and pregnancy. Your doctor may recommend iron studies. If low iron levels are found, treatment with iron and vitamin C tablets is recommended. RLS in pregnant women usually ceases within a few weeks of delivery. Patients with uraemia have been cured by kidney transplantation but not by dialysis.

Certain drugs can cause it. These can include antihistamines, antisickness tablets, antidepressants and the major tranquillisers. Some drugs used to treat hypertension have also been implicated.

What are the symptoms?

There is an urge to move the legs upon resting, particularly after retiring to bed. This urge is a response to unpleasant sensations in the legs, especially in the calves. The sensations are commonly and variously described as crawling, creeping, prickly, tingling, itching, contractions, burning, pulling or tugging, electric or shock-like. However, sometimes patients are unable to describe the sensation or refer to it as simply a compulsion to move the legs.

The problem can vary from a minor irritation to a severe, disabling condition.

In some patients the arms are affected in a similar way. The symptoms seem to be aggravated by warmth or heat.

Most patients with RLS experience periodic jerking limb movements (also called nocturnal myoclonus) during sleep and sometimes while awake.

What are the risks or complications?

RLS is not a serious or life-threatening problem and there are no known complications. The disturbing effects are mainly social or psychological. Work, leisure and personal relationships can be undermined. In some instances patients have become severely depressed or suicidal.

What is the outlook?

Although it can be a distressing problem that can come and go for years, it usually responds well to treatment.

What is the treatment?

Self-help

You may have found that something works for you, so keep to that routine. Avoid any substances or factors that you know or suspect affect you.

- Use activities that can reduce symptoms: for example a modest amount of walking before bedtime, massage or prescribed exercises. Try leaning against a wall with your hands, bending one knee and straightening the other until a stretch is felt in the calf.

Note: Getting out of bed and going for a walk or run does not seem to help RLS.

- Good sleep hygiene is advised, namely regular sleeping hours, gradual relaxation at bedtime and avoidance of non-sleep activities in bed (e.g. reading, eating).
- Follow a very healthy diet. Avoid caffeine drinks, smoking and alcohol; some people find this helps.
- Try keeping the legs cooler than the body for sleeping.
- Exercises: A popular treatment is gentle stretching of the legs, particularly of the hamstring and calf muscles for at least 5 minutes before retiring. This can be done by lying on your back and using a wide crepe bandage, scarf or other length of material around the foot to stretch and then relax the legs.

Medication

If the simple measures do not work, taking two paracetamol tablets and/or a small dose of a mild muscle relaxant such as diazepam or clonazepam one hour before bedtime may be effective.

Other drugs that have been used with effect include paracetamol, levodopa (used to treat Parkinson's disease) and baclofen. Avoid antihistamines and the major tranquillisers. Quinine, which is used for cramps, is usually unhelpful.

If a particular medication is thought to be the cause of RLS (as a side effect), then the medication may need to be stopped or changed by your doctor.

Rosacea and perioral dermatitis

The most common cause of a rash on the face is acne, typically in adolescents. Two other common causes of an embarrassing facial rash in adults are rosacea and perioral dermatitis.

What is rosacea?

Rosacea is an acne-like inflammation of the skin of the face, of unknown cause. It causes red flushing with small, red, raised bumps (papules) and, sometimes, pus-filled spots (pustules or pimples). It tends to come and go. It is referred to as 'the curse of the Celts'. The name is derived from the Latin, meaning 'like roses'. It is not contagious.



Typical facial appearance of rosacea

Typical features

- Involves the cheeks, nose, forehead and chin
- Mainly occurs between 30 and 50 years of age
- More common in women
- The nose can enlarge (rhinophyma), especially in men
- May be tender
- Sensation of burning and stinging
- Can affect the eyes

It is aggravated by:

- stress/anxiety
- overheating (e.g. saunas and hot baths)
- excessive sun exposure
- hot drinks, especially coffee and tea
- hot and spicy foods that induce flushing
- alcohol to excess
- exercise
- corticosteroid creams, especially fluorinated ones.

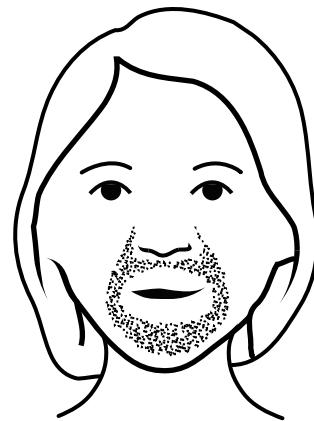
Treatment

- Avoid or reduce aggravating factors (e.g. sun, alcohol).
- Avoid oil-based makeup.
- Your doctor may prescribe an ointment or gel such as metronidazole.
- Use cold packs to reduce inflammation.

- Antibiotics as prescribed by mouth for 8 to 10 weeks.
- Laser therapy may be used in some cases.

What is the risk?

- It is harmless but tends to recur.
- It may clear up spontaneously in time.
- Complications include eye infection and rhinophyma (a swollen bumpy nose).
- The best treatment is oral antibiotics (e.g. tetracyclines), although rosacea is not an infection.



Typical facial appearance of perioral dermatitis

What is perioral dermatitis?

It is an acne-like, scaly dermatitis of the lower face and may be a type of seborrhoea. It also has redness, papules and maybe pustules. The cause is not clear but it seems to be related to rosacea. Flushing occurs commonly. It tends to come and go. It is not a serious condition.

Typical features

- Involves the area around the lower nose and mouth and chin
- Mainly affects young women

It is aggravated by:

- topical corticosteroids, especially fluorinated ones
- pregnancy
- oral contraception
- creamy cosmetic products.

Treatment

- The best treatment is a course of antibiotics such as tetracyclines taken by mouth for 6 or 8 weeks.
- Sometimes topical ointments may be prescribed for mild cases.
- There is no special diet.
- Cease (slowly) all creamy preparations including cleansers, moisturisers and makeup.

Schizophrenia

What is schizophrenia?

It is a complex disorder of the mind that results in disorganisation of normal thinking and feeling. Schizophrenia, which literally means ‘split mind’, is often thought of as a split or double personality (the ‘Dr Jekyll and Mr Hyde’ perception), but this is a false impression as it is no such thing. It is not an intellectual disability.

Schizophrenia, which is the most talked-about psychotic disorder, can come in various forms with different symptoms and outcomes. The common type is described here.

What is the cause of schizophrenia?

The cause or causes are not yet fully understood, but we know that there is a malfunction or breakdown in some cells in the brain, most likely due to a chemical imbalance or deficiency. This problem can be triggered by very stressful circumstances, illness, drugs (e.g. cannabis), major surgery and childbirth. It is not caused by family upbringing or other parental influences. However, there is a strong genetic factor involved—it can run in families.

What are the symptoms?

The ‘attacks’ may come on suddenly or, as is more usual, gradually with a withdrawal from daily activities and the onset of unusual or strange behaviour. The symptoms include:

- mixed-up thinking (called thought disorder)
- mixed-up feelings (feeling ‘unreal’)
- hallucinations, especially hearing imagined things
- delusions (a fixed wrong belief)
- lack of insight
- loss of energy and initiative
- inappropriate emotions
- withdrawal from social activities
- slow or unusual movements
- bizarre behaviour
- deterioration in work and study performance
- tension, anxiety or depression.

The hallucinations are typically auditory, such as ‘hearing’ strange voices in the head or in the air. Visual hallucinations (seeing things) and tactile hallucinations (feeling things) are uncommon.

What does the onlooker notice?

The affected person appears to become withdrawn, vague, ‘flat’, unable to converse normally and logically, unable to answer questions normally (may be blank) and lacking in feeling.

His or her emotions will appear flat and inappropriate (such as laughing at something sad or serious and crying without cause). The person may start neglecting his or her personal appearance.

How does the sufferer feel?

The person feels confused, lonely and afraid. He or she may be aware of loss of control of thinking and behaviour. The person may feel that he or she is being controlled from outside and perhaps may feel under threat from people who actually love him or her. The person may feel great tension and anger. Social isolation is a major problem.

How common is schizophrenia and who gets it?

About 1 person in 100 has it to some degree while about 4 in 1000 will be suffering from it at a given point in time. It is typically seen in young adults—most people develop it between the ages of 15 and 25. Men and women are equally susceptible. Anyone can develop it, but it does tend to run in families.

What are the risks?

The main risks occur during severe attacks, when sufferers can do physical harm to themselves and others. This applies especially to the older paranoid schizophrenic. They also may try to commit suicide and about 10% do actually commit suicide.

What should relatives or friends do?

Medical care is vital for these people—if you suspect someone in your family has the problem, persuade him or her to visit the doctor, whom you should contact beforehand to explain your observations. The person can be most uncooperative and upset, but must not be left alone—medical help must be obtained. The person will have little or no insight into the problem and will often claim that there is nothing wrong. A lot of family support is needed.

What is the treatment?

Effective treatment is available in the form of major tranquillising drugs (which treat the symptoms, not the disorder), psychotherapy and rehabilitation. Once the problem is under control, the patient needs ongoing supervision, possibly including regular injections. Support is available from various organisations (e.g. SANE Australia Helpline, 1800 187 263). Ask about support groups.

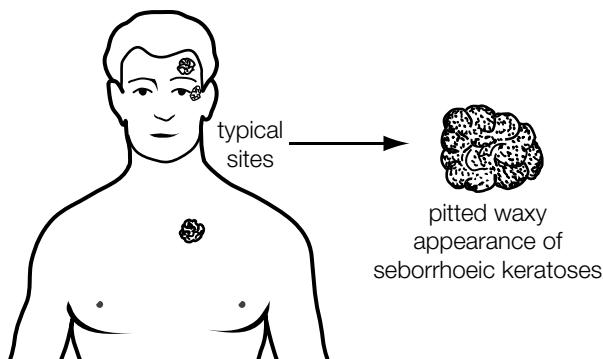
What is the outlook?

Most people recover and lead normal lives but may require regular checks or constant medication. Times of extreme stress create risk of relapse. There are varying degrees of schizophrenia, from mild to severe. The mild cases usually ‘bounce back’ to normality, while the severe ones can have problems most of their lives, especially if unsupervised.

Seborrhoeic keratoses

What are seborrhoeic keratoses?

Seborrhoeic keratoses are harmless, brown, slightly raised growths that give the appearance that they are sitting loosely on the skin. They are one of the most common skin blemishes. Some people refer to them as 'delayed birthmarks' while others refer to them unkindly as 'barnacles of old age'. The cause is unknown. They are more common with advancing age and in those with a family history of these lumps.



Where are they located?

Although they can occur anywhere, they are usually found on the face and trunk (chest and back). One type, which is a softish white lump, is commonly found on the legs of older people.

What are the features of seborrhoeic keratoses?

The raised lumps have the following characteristics:

- flat top with a well-defined border
- pitted surface
- may be waxy or greasy crusty surface
- appear to sit on the skin
- round or oval but can be any shape
- colour varies from yellow to dark brown, occasionally black
- vary in size from a few millimetres up to 5 centimetres (2 inches) or even larger.

Some can appear as though a dried sultana has been pressed onto the skin. Others can have a surface resembling a 'currant bun'. They may be solitary or, more commonly, multiple. The lumps are asymptomatic, that is, they do not itch or cause pain.

Who gets them?

Any adult can acquire them and both sexes are equally affected. They are age-related and increase in number and degree of darkness with advancing age. They are rare under 40 years of age and usually start to appear after 50 years, when they are flat, light-coloured and inconspicuous. By the age of 60, almost everyone has a few seborrhoeic keratoses.

What happens to them?

They usually gradually get larger and darker and increase in number. Sometimes they are rejected by the body and fall off, leaving a pale area on the skin. However, most remain permanently.

What is the risk?

There is no risk. They are not contagious or infectious and they do not become malignant (cancerous). The very dark lumps can cause concern because they resemble a melanoma but your doctor can reassure you about this problem. Many people tend to scrape them with their fingernails. This habit is not recommended because they can become infected. They also invariably grow back.

What is the treatment?

There are no tablets or ointments that will cure or prevent these growths. As they are harmless their removal is not recommended and they can be safely left. However, ugly ones affecting a person's appearance and those that keep catching on clothing can be removed by various methods including surgical excision. Others, especially thin ones, can be shrunk or decoloured by applying liquid nitrogen or other strong chemicals carefully to the surface: your doctor can talk to you about this.

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Skin cancer

Skin cancer is usually found in fair-skinned people who are exposed to too much sun.

What are the main types of skin cancer?

Basal cell carcinoma

- The most common and least dangerous type
- Usually appears on the face and neck
- Is easily treated
- Most common over 50 years of age

Squamous cell carcinoma

- Is quite dangerous
- Appears on sun-exposed areas—hands, forearms, face and neck
- Common on lower lip, ear and scalp in men with thin or no hair
- Can spread to other parts if left untreated too long
- Most common over 60 years of age
- More common in men with outdoor occupations
- More common in people with a fair complexion
- The first sign is a thick lump with a crust

Melanoma

- The rarest and most dangerous type
- Usually starts in a mole
- Only a few moles become melanoma
- Can occur anywhere on the body

What are the signs of skin cancer?

- Crusty non-healing sores or 'sunspots'
- A persistent small lump or spot that is red, pale or pearly in colour
- A new spot, freckle or mole that has changed colour, thickness or shape over months

Important

Dark spots (dark brown, black or blue-black) need special attention.

What are the causes?

The main cause is exposure to the harmful ultraviolet rays of the sun over a long time. Exposure to some chemicals, such as arsenic and polycyclic hydrocarbons, can also cause skin cancer.

What are the areas to watch?

Watch your face, ears, neck, shoulders, arms and the backs of your hands. However, melanoma is an exception and can appear anywhere on the body.

Who is at risk?

Older people are at risk, as the risk of skin cancer increases with increasing age. Fair-skinned people living in hot, sunny climates are most at risk. People with freckles, several dark moles and fair skin are especially at risk. It is most common in people of Celtic (Scottish, Irish and Welsh) background. It is not as common in people with very dark skin (of African, Indian and Asian origin). It is rare in Australian Aborigines.

The darker the skin, the lower the risk of developing skin cancer. Those with fair, sensitive skin who burn easily and rarely tan are at greatest risk.

Sunspots (solar keratoses) are dry, rough, persisting spots on the skin, which can change into skin cancer and need to be watched.

How is it prevented?

Protect yourself from the sun:

- Try to avoid direct sunlight when the sun is strongest (from 10 am to 3 pm standard time, and from 11 am to 4 pm daylight-saving time).
- Always wear a broad-brimmed hat, T-shirt and long, loose shorts when in the sun.
- Be wary of reflected sun on cloudy days and wind that dries the skin.
- Use an SPF factor 30 or more sunscreen on exposed skin and renew it regularly.
- Make sure you protect yourself at high altitudes.
- Wear a shirt or dress with sleeves.
- Avoid sunburn.
- Protect children from sunburn. Their skin is more sensitive than adults' skin to sunlight.

Early detection

The earlier you detect skin cancer, the simpler the treatment. The outlook for most skin cancers is excellent.

Remember

You are the best person to check your skin—no one knows it as well as you.

Consider regularly photographing spots (especially pigmented ones) to monitor any change.

What should be done?

Go to your doctor without delay if you develop a skin lump. The doctor may want to remove part or all of it for examination in the laboratory.

Sleep problems: insomnia

How much sleep do we need?

Many people are not aware that the amount of sleep we need for normal health varies with our age. Also, adults differ in the amount of sleep they need; for some, 4 hours a night is ample; for others, 10 hours is not enough. The average sleep for a 50-year-old is 7 hours a day.

What is a sleep problem?

There is a problem when lack of sleep or too much sleep interferes with your activities during the day. The most common cause is insomnia, which may be caused by anxiety or depression. There are other problems that can interfere with sleep, including problems of your bed mate. These problems include restless legs, sleep apnoea (brief periods of not breathing) and snoring.

What is insomnia?

Insomnia, which means 'poor sleep', is a lack of adequate sleep, which may be difficulty getting off to sleep, difficulty staying asleep, or waking early. It is a temporary problem in most instances and is usually due to a passing personal problem; however, sometimes it just happens for no reason.



What can I do to settle to sleep?

If you have difficulty going to sleep, the following guidelines might be useful:

- Do not try too hard in attempting to go to sleep.
- Establish a routine to follow before going to bed.
- Consider going to bed later.
- Go to bed to sleep (not to read, eat or watch television).

- Only lie down to go to sleep when you feel sleepy.
- Try to settle down before going to bed. Do not try to sleep immediately after a heavy meal, after difficult work that required a lot of concentration, after strenuous exercise or after an emotional upset or argument.
- Try to recognise what helps you settle best. The following are useful to some people: glancing through a magazine, listening to the radio, having a warm (not too hot) bath or shower, or some other relaxation technique. You might find something else that works better for you.
- Often, having a warm milk drink as you retire to bed will help.
- Many people find that drinks containing caffeine (such as tea, coffee and cocoa) make it difficult to go to sleep. Avoid them prior to retiring.
- Alcohol can stop many people from settling to sleep and can cause others to have disturbed sleep.
- Decide the hours during which you want to sleep and try to sleep only within that period. Repeated 'naps' during the day will make sleep at night difficult.
- In general, you will come to no harm if you do not sleep at all for 1 or 2 nights; you will catch up later.
- Find a settling-down routine that works best for you. Even if it seems only partly effective, the fact that you have a routine will eventually assist your sleep.
- Undertake a relaxation program such as meditation. Don't take your worries to bed.
- Don't keep yourself awake by worrying about going to sleep.
- Make your bedroom environment a good place to be—attractive, quiet, dark and relaxing.

What about sleeping tablets?

Doctors prefer you to work at getting a natural sleep by the various relaxation techniques and not to take sedative drugs. However, sometimes drugs can help you over a difficult period and may help you get into a pattern.

Some sedative drugs are suitable, but should be taken for a short time (say 2 to 3 nights) and taken in the lowest effective dose. Most people seem to make a prescription of 25 tablets last for 3 to 6 months, and this is sensible.

Rarely, some people with chronic insomnia manage best with regular use of sleeping tablets and cannot manage without them. In such instances, long-term use of sleeping tablets may be justified.

A special tip

Special sleep disorder units to help your problem are present in most major cities. Ask your doctor about them.

Snoring

What is snoring?

Snoring is sonorous sound with breathing during sleep, caused by vibrations in the upper airways from the nose to the back of the throat. It is caused by partially obstructed breathing during sleep.

What are the facts?

Snoring is extremely common and only rarely indicates obstructive sleep apnoea (slowing or stopping of breathing for short periods while sleeping). It is 3 times more common in obese persons and increases as we get older.

It varies from being an annoyance to others (the snorer is usually oblivious to the problem) to indicating obstructive sleep apnoea.

What makes snoring worse?

- Obesity
- Old age
- Sleeping on the back
- Excess alcohol
- Neck problems, especially a 'thick', inflexible neck
- Various drugs, especially sedatives and sleeping pills
- Hay fever and other causes of nasal congestion
- Problems in the upper airways such as nasal polyps, enlarged tonsils or a foreign body (e.g. a piece of plastic or metal)

What are the risks?

Snoring is generally a harmless problem but if it is very severe, unusual or associated with prolonged periods of no breathing (usually longer than 10 seconds) then it is advisable to have it assessed in a special sleep laboratory. It may indicate obstructive sleep apnoea.

The social risks are a major problem as it can lead to a breakdown of relationships, to varying degrees. Heavy snorers should have a thorough examination of the upper airways (nose to throat) and of the neck.

What is the treatment?

If an examination rules out a physical problem causing obstruction in the back of the nose and obstructive sleep apnoea, then the following simple measures can be tried:

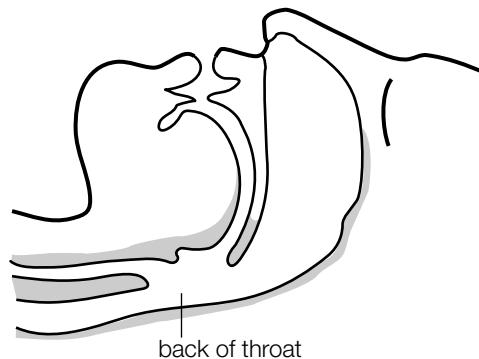
- Obtain and keep to ideal weight. Overweight people could attend a weight-loss group such as Weight Watchers and take regular exercise.
- Avoid drugs (including sedatives and sleeping tablets), alcohol in excess and smoking.

- Treat nasal congestion (including hay fever) but avoid the overuse of nasal decongestants.
- For neck problems, keep the neck extended at night by wearing a soft collar.
- Consider a trial of an intranasal or oral device to help keep your airways open during sleep. Your pharmacist can advise you about the range of such devices.
- Try to sleep on your side. If you tend to roll onto your back at night, a maverick method is to consider sewing ping pong balls or tennis balls on the back of the nightwear. Others wear a bra (with tennis balls) back to front.

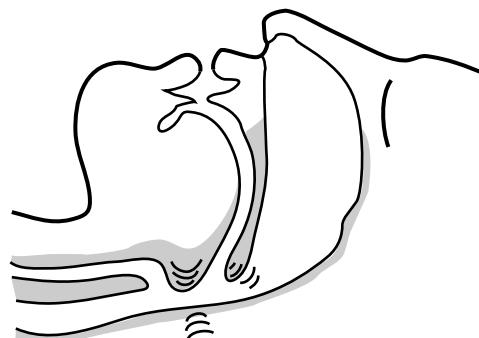
Special surgical procedures may solve the problem for some people with very severe snoring. Others may be helped with special machines that deliver continuous positive airway pressure (CPAP) through a face mask.

Special anti-snoring pillows have not proved to be any better than regular pillows nor has raising the head of the bed.

When all else fails, provide those affected in the household with ear plugs or alternative sleeping arrangements.



Normal airway when lying down to sleep



Vibrations of the soft palate and tongue in snoring

What is social phobia?

Social phobia is an abnormal fear or aversion of social gatherings, where the affected person feels subject to public scrutiny and avoids such anxiety-provoking situations as much as possible. It is sometimes referred to as social phobia disorder and is much more than shyness. It can vary from a predictable fear of a new social experience to an extremely morbid fear that significantly affects a person's life. The basic fear is that of being regarded unfavourably by others and feeling embarrassed or humiliated by one's appearance or performance.

How common is it and who gets it?

It is the most common of all the anxiety disorders. Studies indicate that about 1 in 7 people suffer from social phobia at some time in their lives. Anyone can develop it. It is usual to have an early age of onset, with almost 100% of sufferers having it by the age of 20 and many of these by the age of 10.

What are the typical situations?

Although the anxiety-provoking situations vary from person to person, the following are common:

- speaking engagements
- meeting people, especially for the first time
- dealing with authority figures or professionals
- sitting for examinations
- dating
- eating and drinking in public (e.g. in canteens)
- negotiating with others
- staff meetings
- using public toilets
- writing while being watched
- receiving visitors
- entering a room where others are seated.

A common factor in these situations is that people feel that they are in the 'limelight' and are being judged by other people.

What is the cause?

We often hear the term 'adrenaline rush' when people in a stressful or exciting situation describe how they feel adrenaline pumping around the body. It does indicate that the brain and other parts of the central nervous system are responding to stimulus. We call it sympathetic activity because it involves this component of the autonomic nervous system.

In people with social phobia there is sympathetic overactivity as the responsible chemicals, particularly adrenaline and serotonin, are released in large amounts. The person cannot be blamed because the body goes into 'automatic' mode as a conditioned response.

There may be a genetic (inherited) predisposition and there is evidence of a bad childhood experience in some people.

What are the symptoms?

Typical symptoms include one or more of the following:

- palpitations
- sweating

- tremor or trembling
- hot and cold flushes
- light-headedness
- 'butterflies' in the stomach
- nausea
- 'lump in the throat' or difficulty swallowing
- diarrhoea
- muscle tension or aching
- tension headache
- restlessness.

What is the outcome?

The symptoms can certainly interfere with a person's life and make him or her miserable. A panic attack can occur. When a person experiences these symptoms it tends to affect their self-image and may make them feel 'stupid' or weak. This response aggravates the problem, so a vicious cycle develops. It can also lead to other phobias such as agoraphobia (fear of open spaces or leaving home).

Serious consequences include relationship breakdown, depression, substance abuse, especially of alcohol, and loss of employment opportunities.

What is the treatment?

Self-help is difficult because the phobia does not usually go away on its own. Some people may be able to cope by avoiding certain stressful situations but this does not solve the basic problem. Professional help should be sought. This includes counselling techniques and medications, which can be used separately or in combination.

Counselling

The main psychological technique used is cognitive behaviour therapy (CBT). Cognitions are thoughts, beliefs or perceptions and CBT involves the process of knowing or identifying, understanding or having insight into these thought processes. Certain thought processes in social phobia reinforce the belief that people are watching and judging you. The techniques attempt to identify and break these patterns to help you feel more comfortable with other people. The therapy then aims to help you change your behaviour, gradually face up to social situations and find them less threatening. Other techniques may include relaxation techniques and group therapy where other people share their experiences.

Medication

Sometimes your doctor will prescribe medication to treat social phobia, especially if anxiety and depression are involved.

For social phobia with performance anxiety, a beta-blocking agent taken 30–60 minutes before a social event or performance can be beneficial. Check with your doctor, but remember they are not permitted in some competitive sporting events.

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Squamous cell skin cancer

What is squamous cell skin cancer?

Squamous cell carcinoma (SCC) is the second most common form of skin cancer.

It is a serious form of skin cancer in which cells in the epithelial layer (skin surface) of the skin develop into a malignant tumour.

What is the cause of SCC?

The two main factors in causation are sun exposure and skin type (fair skin that tans poorly and burns easily). As with other types of skin cancer, years of exposure to the ultraviolet rays of sun is the main cause. Long-term damage to these surface cells triggers the growth of abnormal cells. The cause of most cases is:

- excessive exposure to sunlight.

Uncommon causes are:

- skin damage by radiation
- exposure to coal tar and various industrial tar products
- exposure to chemicals such as arsenic and polycyclic hydrocarbons.

Queensland has the highest rate of skin cancer in the world.

Who gets SCC?

Any person can get an SCC but it is more common with increasing age and in men, which may reflect greater exposure to sunlight.

The risk increases with:

- adults over 60 years
- a fair complexion
- an outdoor occupation
- the development of sunspots (solar keratoses).

The problem is rare in people with dark skin. Sunspots (solar keratoses) are dry, rough, persisting spots on the skin that can change into a SCC, and need to be watched and treated if they change appearance.

Where do SCCs usually occur?

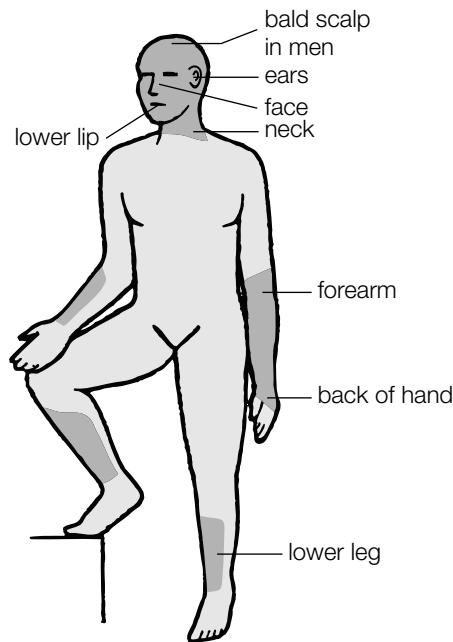
They usually develop in skin exposed to the sun, particularly the face (especially the lower lip), the ears, the neck, the forearms, the back of the hands and the lower legs. In older men they can occur in the bald scalp. A whitish thick patch on the lip (especially lower lip) may be the forerunner of a SCC.

What are the symptoms and signs?

The first sign is a thick, fleshy lump with crusting that appears on the skin and grows steadily. It may look like a wart or small ulcer at first. It becomes crusty and may bleed. The lump is not usually painful or itchy, although it may be tender to gentle squeezing.

What are the risks?

This cancer has to be treated with considerable respect. If it is allowed to grow unchecked it may spread to other parts of the body by 'seeding' through blood vessels or lymphatic channels. If this metastatic effect occurs, the outlook is very poor. However, if the problem is detected early, treatment is simple and effective and the outlook is excellent.



Common sites of SCC

What should be done?

It is important to visit your local doctor without delay if you develop a suspicious skin spot for no apparent reason. If considered suspicious, the doctor may want to remove a small sample for laboratory microscopic analysis (a biopsy) or may completely excise the spot if it appears to be an obvious SCC.

How can SCCs be prevented?

Protect yourself from the sun.

- Try to avoid direct sunlight when the sun is strongest, from 10 am to 3 pm (standard time) or from 11 am to 4 pm daylight-saving time.
- Use an SPF30 or more sunscreen on exposed skin.
- Wear shorts or a dress with sleeves and a broad-brimmed hat.
- Be wary of reflected sun on cloudy days.
- Don't be fooled by wind making you feel cool; you may still be exposed to UV rays.

What is the treatment?

Most SCCs are easily removed by a minor surgical operation in which the total spot is removed along with a small margin of about 3 to 5 millimetres of skin to ensure that all the malignant cells are removed. When the tumour is large, a skin graft will be needed to cover the remaining defect. Other treatments that can be used are radiotherapy, laser therapy and cryosurgery (freezing of the tumour). Over 99% of patients are completely cured by this treatment. Regular check-ups are recommended over the next few years in order to detect if any of the cancer remains. If this is the case, the treatment is repeated.

Stress: coping with stress

What are the effects of stress?

Abnormal stress can have many troublesome physical and emotional effects on us, but they vary from person to person. Common problems are tiredness, fatigue, anxiety, sleep disturbance, poor concentration, restlessness and irritability.

Stress-related illnesses include depression, drug abuse (including problem drinking), irritable digestive system, headache, mouth ulcers, impotence, irritable bladder, neurodermatitis, and breast pain.

What are important causes?

We are constantly under some form of stress in our lives and generally cope very well. The most stressful circumstances leading to ill-health have been shown to be death of a spouse or close family member, divorce and marital separation, imprisonment, personal injury or illness, marriage, retirement, sex difficulties, pregnancy, travelling (especially in heavy noisy traffic), guilt over a wrongdoing and similar traumas. However, many of us feel unduly stressed over modern living and we need help.

What can you do to cope?

- Take time out—a few times a day—to stop and switch off.
- Talk it over with someone—have regular chats.
- Look for solutions: stop escaping.
- Practise relaxation (e.g. listen to lots of music).
- Learn to meditate and breathe slowly.
- Get enough sleep and rest.
- Develop healthy hobbies (e.g. puzzles, knitting, reading).
- Do things that you enjoy (e.g. go to the movies or a show weekly).
- Develop strategies to laugh—do fun things.
- Practise a sensible, healthy diet.
- Exercise for 30 minutes, 4 to 5 times a week.
- Avoid smoking and other drugs and limit alcohol.
- Consider getting a pet.
- Avoid conflicts, especially interpersonal conflicts.
- Learn to accept what you cannot change.

Talking it over

'Getting it off your chest' is more important than you realise. Talk to someone you admire and trust. Going to a minister of religion, a psychologist or your doctor can help relieve you of a psychological burden you may be carrying.

Relaxation

Practising relaxation is vital for the stressed person. Meditation is excellent and classes are available, but you can practise on your own.

Make a commitment to yourself to spend some time every day practising relaxation. About 20 minutes twice a day is ideal, but you might want to start with only 10 minutes.

- Sit in a quiet place with your eyes closed, but remain alert and awake if you can. Focus your mind on the different muscle groups in your body, starting at the forehead and slowly going down to the toes. Relax the muscles as much as you can.
- Pay attention to your breathing: listen to the sound of your breath for the next few minutes. Breathe in and out slowly and deeply.



- Next, begin to repeat the word 'relax' silently in your mind at your own pace. When other thoughts distract, calmly return to the word 'relax'.
- Just 'let go': this is a quiet time for yourself, in which the stresses in body and mind are balanced or reduced. Try to practise when your stomach is empty: before breakfast and before the evening meal are ideal times.

During the day, check yourself frequently for tension: take a few long, deep breaths and breathe away the tension.

Practise positive thinking. If you catch yourself thinking negative thoughts about your illness, silently say over and over to yourself: 'Every day, in every way, my health is getting better and better'.

Note: For some people, prayer is an excellent form of meditation and relaxation.

Health through nutrition

A sensible approach to your diet can make you feel marvellous. Increase the amount of complex carbohydrates and fibre (vegetables, fruit, whole-wheat products, brown rice, cereals, etc.) in your diet. Drink plenty of water. Decrease salt, total fats (butter, cream, meat fats, cheese, peanut butter, etc.), refined carbohydrates (sugars, sweets, cordials, ice-cream, cakes, etc.) and caffeine (coffee, tea and cola drinks). Reading The Pritikin Promise will provide many healthy ideas and recipes.

Exercise

Devise a program suitable for you. Walking for 20 minutes each day or every second day is an excellent start. A good callisthenic or yoga program is ideal.

Psychotherapy

To treat stress, some GPs and psychologists offer a form of treatment called psychotherapy, or 'talking therapy'. There are many types of psychotherapy available; a popular one is cognitive behavioral therapy (CBT), which helps correct faulty thinking about the situations in your life that may be causing stress and anxiety. Ask your doctor about these treatments.

Recommended reading

- Dawn Groves, Stress Reduction for Busy People: Finding Peace in an Anxious World. New World Library, Novato, 2004
- C. Norman Shealy, 90 Days to Stress-Free Living, Element, 1999

Sunburn

Sunburn is inflammation or redness of the skin caused by overexposure to the ultraviolet rays of the sun or to sun lamps. It is more likely to occur in people with light-coloured skin.

What are the symptoms?

The effects of sunburn can vary from mild to severe.

Minor sunburn

- The skin is only mildly red.
- There is only mild discomfort for about 2 days.

Moderate sunburn

- The skin is red, hot and tender.
- Discomfort develops in only a few hours and settles in 3 to 4 days.
- There is some peeling of the skin.

Severe sunburn

- The skin is red, hot, painful and swollen.
- Blisters develop.
- If the sunburn is very severe, there may be headache, fever, nausea and possibly delirium.

What are the traps?

Sunburn is not only caused by exposure to the direct rays of the sun in the cloudless sky. It can also occur on hazy or overcast days, as thin clouds and light smog do not fully trap the effect of ultraviolet rays. Sunburn can also be caused by rays reflected off water, sand, snow and concrete. Taking various drugs (such as some antibiotics, hormones and tranquillisers) can increase the risk of sunburn.

What are the risks?

Severe sunburn can cause dehydration and skin loss, which may result in poor healing. Repeated sunburn or constant

overexposure to the strong sun causes premature ageing of the skin with wrinkling and can lead to skin cancer.

What skin areas are most at risk?

The nose, cheeks, ears, back of neck and backs of the legs are most likely to be sunburnt.

How can you prevent sunburn?

- Avoid the direct sun from 10 am to 3 pm (11 am to 4 pm in daylight-saving time).
- Use a sunscreen with an SPF factor of 30 or more.
- Use natural shade. Beware of reflected light from sand or water and light cloud.
- Wear a broad-brimmed hat and protective clothing.
- Wear muted colours, such as light tan, in preference to whites and bright colours.
- Use zinc oxide ointment for maximum protection.

What about sun tanning?

Tanning indicates damage to the skin from too much ultraviolet radiation. There is no way to tan safely and it should be avoided.

What is the treatment?

- Hydrocortisone 1% cream or ointment is helpful for more moderate to severe sunburn. It should only be used in the first 24 hours and not on broken skin.
- Cold compresses ease heat and pain: dip gauze or towels in cold water and lay these on the burnt areas.
- Soak in a water bath containing oil (baby oil) or baking soda. Pat the skin dry afterwards.
- Oily calamine lotion can soothe after bathing.
- Aspirin (use only in people aged 16 or over) or paracetamol relieves pain and any fever.
- Increase your fluid intake, especially for severe burns.
- Avoid exposing the skin to the sun until the redness and tenderness has disappeared.

Systemic lupus erythematosus

What is systemic lupus erythematosus (SLE)?

Systemic lupus erythematosus, also called (more simply) lupus or SLE, is a complex medical condition that causes inflammation of and damage to the connective tissue in any part of the body. As it implies, connective tissue is the soft tissue in the body that connects and holds together the various parts such as bones and organs. It is therefore referred to as a connective tissue disorder. The explanation of the term is as follows:

- Systemic: means affecting many body systems.
- Lupus: derived from *lupinus* 'wolf' because doctors in the past considered that the skin flare on the face had a wolf-like or werewolf-like appearance.
- Erythematosus: means inflamed and red.

What is the cause of SLE?

The exact cause is not known. It is considered to be a type of autoimmune disorder. In an autoimmune disorder, the body's immune (defence) mechanism functions abnormally and attacks its own normal tissue especially the joints, skin, kidneys, heart and lungs. Lupus is not infectious or contagious.

Who gets SLE?

Lupus can affect anyone, of any age and both sexes but females are 9 times more likely to be affected than males. Doctors usually see women between 15 and 45 years ('the child-bearing years') with lupus but it most commonly appears in the early twenties. It can affect all racial groups although African-Americans have higher rates of lupus.

How common is SLE?

Lupus is relatively uncommon and affects about 1 person in 1000 of the population. It probably affects more than 20 000 people in Australia.

What are the symptoms?

The earliest symptoms are rather non-specific and are similar to those in the early stages of many diseases:

- tiredness or fatigue—feeling generally unwell
- loss of weight
- headache
- muscle aches and pains
- joint aches and pains
- fever.

Other possible symptoms include:

- abdominal pain
- mental changes including depression and even psychoses
- seizures
- mouth ulcers
- loss of hair
- chest pain including pleurisy
- colour changes of hands when cold
- skin rash including a facial rash
- sensitivity of the skin to sun.

The symptoms can vary from one person to another, just as the severity of lupus can vary.

Patients tend to suffer from multiple drug allergies and the oral contraceptive pill can cause special problems.

SLE is diagnosed by special blood tests ordered by your doctor.

What organs are affected by SLE?

Apart from connective tissue, any part of the body can be affected but it can vary considerably. Most commonly, it causes inflammation of the soft tissue membranes that surround the joints, kidneys, lungs and other organs. In many cases, about 30%, the skin is affected. In many a red rash appears on the cheeks (often referred to as a butterfly rash) but it may spread to most of the upper body. The rash may be aggravated by exposure to sunlight.

What is the outlook?

People with SLE can expect to lead a full and relatively normal life, including having children, thanks to modern medical knowledge and medication. Women with SLE should consult their doctor if they are pregnant or considering it.

What are the risks?

SLE can cause various complications, especially atherosclerotic disease of the arteries, pleurisy, kidney problems and central nervous system problems. It is important to watch out for infection or other unusual problems. There is an increased risk of deep venous thrombosis and also miscarriages and stillbirths during pregnancy.

What is the treatment?

In view of the fact that vascular disease is a major cause of serious illness with SLE, patients should attend to other risk factors such as smoking and high blood cholesterol.

Because SLE is a chronic and complex disorder, it is best managed by a multidisciplinary team of general practitioner, specialist and allied health professionals.

Medication

The progress of lupus can be slowed down or halted by vigorous treatment with a variety of drugs which are recommended by your doctor. The drugs include non-steroidal anti-inflammatories, steroids (cortisone), other anti-rheumatic drugs, antimalaria drugs and immunosuppressant drugs such as methotrexate. Lupus is most often treated with hydroxyquinoline (Plaquenil), which is very effective for skin and joint problems. Remember to contact your doctor if you have any concerns.

Support groups

Support groups for lupus or SLE are very helpful to join. Ask your doctor how to contact a local group.

Teeth grinding (bruxism)

What is bruxism?

Bruxism is the involuntary habit of grinding, clenching or tapping teeth, which may occur while awake (especially in children), or while asleep (which is much more common).

How common is bruxism?

It is very common. It is estimated that about half of the population grind or clench their teeth from time to time while about 5% are regular teeth grinders.

What are the symptoms and signs?

Symptoms of bruxism include:

- annoying, teeth-grinding noises during sleep; the person may be oblivious to it but family members can be disturbed and annoyed by it
- tight, aching face muscles and jaw while chewing, especially during breakfast
- aching teeth, especially on waking
- headache and/or earache, during the day
- cracked tooth enamel
- temporomandibular joint dysfunction/pain
- raised tissue of the cheek lining from cheek biting
- inflammation of the tooth socket.

What are the causes?

Bruxism is basically a habit, usually beginning at an early age. It may also be a response to subconsciously correct a faulty 'bite' by making contact between the upper and lower teeth when the jaws are closed. It is aggravated, maybe even caused, by stress and anxiety, as it is noticed to be worse during stressful periods. It is also noticed to be associated with drug dependence, especially in heavy alcohol drinkers.

What are the risks?

The teeth are usually damaged, with wearing down of the crowns and loosening or perhaps breaking of the teeth. The supporting gums and bones may also be damaged

(e.g. periodontitis). There may also be enlargement of the jaw muscles and injury to the temporomandibular joint.

What is the treatment?

Step 1: Acceptance

It is important for the patient to recognise and understand the problem and then make a conscious effort to overcome the habit.

Step 2: Simple tricks

- Practise keeping the jaws apart as often as you think about it.
- Slowly munch an apple before retiring.
- It may help to place a hot towel against the sides of the face before retiring to achieve relaxation of the muscles controlling the jaw.

Step 3: Stress management

Learn ways to cope better with stress. Methods include counselling, meditation, relaxation exercises, yoga and tai chi. Although medicines are best avoided, your doctor may prescribe a tranquilliser or sedative, especially before you retire for the night, for short-term treatment.

Step 4: Dental treatment

Dentists can fashion and fit a plastic night-guard mouthpiece to prevent tooth grinding while asleep. This device, which is quite simple, is a removable splint that fits snugly over the teeth of each jaw to remove incorrect biting pressure. Other dental treatment may be needed to repair damage.

Are there any special restrictions?

Apart from restrictions on alcohol and other drugs of dependence, there are no restrictions. There is no special diet and no restrictions on general activity.

What is the outlook?

The outlook is good. With proper, persistent treatment, the problem is usually curable in 6 to 12 months.

Tension headache

What is tension headache?

Tension headache, which is also referred to as tension-type headache or muscle contraction headache, is a tight, constricting pain covering most of the head and is associated with stress or tension. It is the most common form of headache. Two out of three people will suffer from tension headache at some stage of their life.

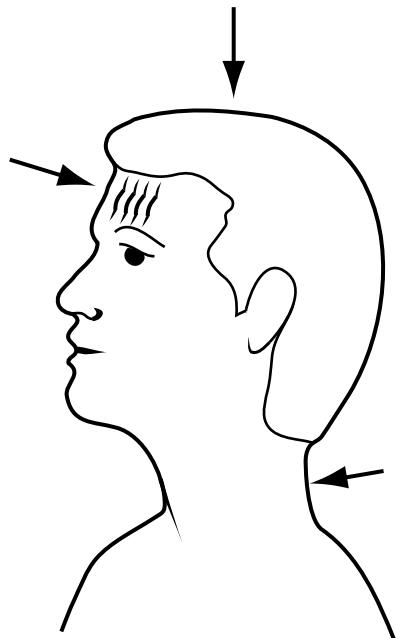
Many sufferers do not realise that the headaches are associated with tension until it is pointed out to them.

What is the cause of tension headache?

Overactivity of muscles of the scalp, forehead and neck causes tension headache. A dull ache or tightness in these areas, like a tight band around the head or a heavy weight on top, results from this overactivity.

Trigger factors

- Increased tension or stress (both mental and physical), for example:
 - excessive worry
 - all work—no play
 - long periods of study, typing or other sustained concentration
 - perfectionism
- Increased tension in the neck muscles, for example:
 - poor posture
 - injuries to the cervical spine (neck)
- Repressed hostility, anger or frustration
- A poor, scrappy diet, for example eating on the run (combined with stress)



Cause

overactivity of muscles of the scalp, forehead and neck

What is the treatment?

The key to treatment is to attend to lifestyle adjustments including diet, exercise, attention to posture of the neck and stress management.

Self-help

The best treatment is to modify your lifestyle in order to eliminate or reduce the trigger factors. For example:

- Learn to relax your mind and body.
- During an attack, relax by lying down in a hot bath or spa with a warm dry cloth (or even a cold wet cloth) over the aching area.
- You could attend special relaxation courses such as yoga or meditation classes.
- Be less of a perfectionist; do not be a slave to the clock.
- Do not bottle things up. Stop feeling guilty. Approve of yourself. Express yourself and your anger.
- If your neck is aching, massage or mobilisation followed by special exercises should help.

Medication

A mild painkiller such as ibuprofen or paracetamol can help stop the pain, but avoid stronger drugs (including tranquillisers) unless directed by your doctor.



Effect

a dull ache or tightness in these areas, like a tight band around the head or a heavy weight on top

The cause and effect of tension headache

Tongue soreness

What are the causes of tongue soreness?

The common causes of a sore tongue are:

- trauma from teeth, especially sharp teeth and bites
- hot food and drink
- aphthous ulcers
- inflammation of the tongue (glossitis) from medical conditions such as iron deficiency
- geographic tongue.

A painful tongue, which is uncommon, usually has a burning pain on the tip of the tongue and is considered to be due to a nervous disorder.

Geographic tongue

Geographic tongue is a non-serious inflammatory condition of unknown cause in which a changing pattern of smooth red patches with a raised margin that can be coloured white, yellow or grey appears on the tongue.

The pattern resembles a relief map with mountain ridges, hence the name. The patches move around to other parts of the tongue with a major change occurring every 3 weeks. The process may then subside and go into remission, which may be complete or partial; however, it may return at a later time. Anyone can get it.

What are the symptoms and signs?

There are usually no symptoms—it is not painful or itchy, nor does it taste bad. However, some people can experience tenderness or stinging, especially with certain foods (usually spicy foods). The main complaint from people is the unusual appearance of the tongue, which continually changes. The area affected is the top surface and edges.

What are the risks and outlook?

There are no risks associated with this problem, hence the term benign migratory glossitis. It is harmless and there have been no reported serious consequences.

The outlook is excellent. It is a self-limiting condition (i.e. it gets better naturally) and usually settles after about 6 weeks. However, it may flare up again at some time in the future.

What is the treatment?

There is no specific treatment, drug or process for it.

People can be reassured not to be concerned about it. If they are unaware of it and it causes no symptoms then no applications at all are recommended. However, it is advisable to avoid spicy foods and practise good oral hygiene, including cessation of smoking if it aggravates the condition. People subject to considerable stress or anxiety should seek help to reduce the impact of these lifestyle factors.

For a tender tongue

Use Cepacaine gargles: 10 mL 3 to 4 times a day for about 3 to 5 minutes, then spit out.

For a persistent and troublesome tongue

Use a low-dose steroid spray as used to treat asthma; for example beclomethasone 50 micrograms: spray on 3 times

a day and try to leave on the tongue for a couple of minutes. Don't rinse out the mouth.

Black tongue

Black tongue, also called brown tongue, is a term sometimes used to describe a black or dark discolouration or stain on the top surface of the tongue. It is a harmless condition but its appearance and presence cause people with the condition considerable concern.

What are the symptoms and signs?

People with black tongue usually complain of a bad taste and dryness in the mouth. It may be responsible for bad breath and be associated with feeling 'off-colour'.

What is the cause?

In many instances its cause is unknown—it just develops. One well-known cause is antibiotic treatment, which can cause an alteration in the normal flora (bacteria and fungi) that reside in the oral cavity. Simply stopping the antibiotics will resolve the problem.

Another cause is a diet that contains no fibre—especially fruit, vegetables and cereals.

Poor general oral hygiene with neglected teeth and the use of tobacco and alcohol coupled with poor nutrition are other common associations. Black tongue may also be associated with stress and a depressive illness.

What is the treatment?

Lifestyle management

This involves a good nutritious diet and drinking lots of fresh water. Eating raw fruit and vegetables that provide roughage on the tongue and in the mouth is advisable. Good examples are apples, celery and carrots. Try to drink up to 2 litres of water a day. You can prepare water with lemon juice and use a plastic bottle to squirt it into your mouth several times a day. Otherwise frequent sips of water help the problem. Good dental hygiene is important, so regular check-ups are also advisable.

If you smoke (or chew) tobacco, try to quit this habit. If you are under excessive stress and 'burning the candle at both ends' try to amend this with a more relaxing, healthy outdoor lifestyle. Adequate rest and recreation should be a major goal in your life.

The pineapple treatment

Cut a thin slice of fresh pineapple into 8 segments. Slowly suck a segment on the back of the tongue for 40 seconds and then slowly chew it. Repeat this until the entire slice is finished. This should take about 8 minutes. Do this twice a day for 7 to 10 days, by which time the tongue usually returns to normal. Repeat this should the discolouration of the tongue return.

Flying has revolutionised travel. Air travel is safe and comfortable; however, 'air sickness' and jet lag are problems that face many travellers. Deep venous thrombosis (DVT) is a special risk for long journeys (more than 4 hours).

What is jet lag?

This is the uncomfortable aftermath of a long flight in which the person feels exhausted and disoriented, and has poor concentration, insomnia and anxiety. The problem on arrival is poor concentration and judgement during daytime.

Other symptoms that may occur include appetite loss, weakness, headache, blurred vision and dizziness.

Jet lag is a feature of flying long distances east–west or west–east through several time zones, causing the person's routine daily rhythm of activity and sleep to get out of phase.

What factors influence jet lag?

General factors

Noise, vibration, air humidity and sitting still for long periods can influence jet lag.

Specific factors

Duration of the flight, time of departure, changes in climate and culture at the destination affect the severity of jet lag. The problem is aggravated by:

- stress of the pretrip planning
- last-minute rushing and anxiety
- lack of sleep during the trip
- overeating and excessive alcohol during the flight
- smoking.

How can you minimise the problem?

Careful planning and a few simple hints observed during and after the flight can ease jet lag.

Before the flight

- Allow plenty of time for planning.
- Plan a 'stopover' if possible.
- If possible, arrange the itinerary so that you are flying into the night.
- Ensure a good sleep the night before flying.
- Ensure a relaxed trip to the airport.
- Take along earplugs if noise (75 to 100 decibels) bothers you.
- Discuss prevention of DVT with your doctor. Compression stockings and aspirin will be helpful.

During the flight

- Fluids: Avoid alcohol and coffee. Drink plenty of non-alcoholic drinks such as orange juice and mineral water.
- Food: Eat only when hungry and even skip a meal or two. Eat the lighter, more digestible parts of your meal.

- Dress: Wear loose clothes (e.g. long skirts, comfortable jeans, light jumpers) and avoid restrictive clothing. Wear comfortable (not tight) shoes and take them off during flight.
- Sleep: Try to sleep on longer sections of the flight (give the movies a miss). Close the blinds, wear special eye 'masks' and ask for a pillow. Consider using sedatives.
- Activity: Try to take regular walks around the aircraft and exercise at airport stops. Perform in-flight exercises by flexing the major muscles of the legs. Avoid resting the calves of your legs against the seat for long periods.
- Melatonin: This hormone is closely linked with our sleeping patterns and is claimed to prevent jet lag. Its use is controversial, so check with your doctor.

At your destination

Take a nap for 1 to 2 hours if possible.

Wander around until you are tired and go to bed at the usual time. It is good to have a full day's convalescence and avoid major decision-making soon after arrival. Allow about 3 days for adjustment after the Australia to London flight.

Who is fit to fly?

Patients with these problems should avoid flying:

- upper airways congested by infection, including influenza
- severe respiratory disease (emphysema, chronic bronchitis, pneumothorax)
- unstable heart failure
- severe anaemia (below 70 g/L)
- pregnancy beyond 200 days (28 weeks)
- previous violent or unpredictable behaviour
- within 4 weeks of a myocardial infarction (coronary or heart attack)
- within 14 days of a cerebrovascular accident (stroke)
- within 14 days of major surgery
- brain tumour or recent skull fracture
- recent eye surgery.

Special precautions are required by travellers with:

- Colostomy: Patients should wear a large colostomy bag and take extra bags.
- Varicose veins: Wear supportive stockings and exercise frequently.
- Plaster casts: Those with broken limbs in plaster should be careful of swelling.
- Pacemakers: Those with pacemakers may have a problem with X-rays at some overseas airports. Mention it to officials before passing through security equipment.
- Epilepsy: Medication should be increased on the day of travel.
- Diabetes: Diabetics should discuss their therapy and control with their doctor.
- Previous DVTs: Check with your doctor.

Travel: guide for travellers

Travellers to countries that have low standards of health and hygiene risk contracting infectious diseases. Most problems are caused by contaminated food and water and by mosquitoes, which transmit malaria, yellow fever, dengue and Japanese encephalitis.

Prevention is better than cure; the advice that follows is designed to minimise the chance of contracting a serious disease while travelling overseas.

Food and drink

Diseases that can be picked up from eating and drinking contaminated food include travellers' diarrhoea, hepatitis A, cholera and typhoid.

While visiting countries at risk, drink only boiled water and reputable commercially bottled beverages. Avoid ice, dairy products, salads, uncooked foods, ice-cream, raw seafood, shellfish and food from street vendors.

You can purify water by boiling it or adding iodine tablets.

Vaccinations

Important recommended vaccinations are shown in the table. Your doctor will advise you on which vaccinations you will need. Other diseases to consider are rabies and typhus.

Malaria

One sting from an infected mosquito can cause serious illness. Malaria is common in many African, South American and South-East Asian countries. To prevent malaria, protect yourself from mosquitoes and take antimalarial drugs prescribed by your doctor.

Avoid rural areas after dusk. Use insect repellents that contain diethyltoluamide (such as Rid or Repellem). Wear protective light-coloured clothing with long sleeves and legs, and sleep in screened rooms or use mosquito nets. Avoid using cologne, perfume and aftershave.

Antimalarial drugs should be taken before exposure and up to 4 weeks after exposure to give maximum protection.

Malaria that resists drug treatment with chloroquine occurs in many countries. Your doctor will prescribe another drug as well as or instead of the usual chloroquine if you are at risk of exposure to this type of malaria.

Drugs cannot guarantee 100% protection. If you develop an unexplained fever, sore throat or severe rash, seek medical advice.

Your destination

Different countries have different vaccination requirements. For advice about the country you intend to visit, contact your own doctor.

Diarrhoea

There are several ways to relieve and treat travellers' diarrhoea:

1. Avoid solid foods and drink small amounts of fluids often. (Remember: use only boiled water or safe commercial beverages.)
2. Rest.
3. Take antidiarrhoeal tablets (Imodium or Lomotil) as directed (for mild cases).
4. When the diarrhoea has settled, eat light foods such as rice, bread or biscuits.

Some golden rules

- Never carry a parcel or baggage to oblige a stranger.
- Avoid casual sex. If not, use a condom.
- 'If you can't peel it, boil it or cook it, don't eat it.'
- Never walk around barefoot at night in snake-infested areas (and use a torch).
- Prevent mosquito bites.

A guide to vaccination for travellers for important diseases (in rural areas of high-risk countries)

Vaccination	Duration	Comments
Tetanus	10 years	Essential for travelling
Diphtheria	10 years	Essential for travelling
Polio	10 years	Essential for travelling
Yellow fever	10 years	Compulsory if visiting certain central African or South American countries
Cholera	3 months	Not recommended by WHO; still required if epidemic
Typhoid	2–3 years	Recommended for all developing countries
Influenza	1 year	Crowded conditions, elderly
Pneumococcus	5 years	Crowded conditions, elderly
Varicella	life	Recommended for travelling
Hepatitis A	varies	Ask your doctor
Hepatitis B	5 years	
Tuberculosis	life	
Measles/rubella	life	
Meningococcus	3–5 years	Consider for visits to endemic areas if in close contact with locals
Japanese B encephalitis	1–4 years	Consider in certain Asian countries for trips longer than 12 months or during an epidemic
Rabies	1 year	Recommended for long stays in high risk areas

Travel sickness

Who gets travel sickness?

Almost everyone is sick when sailing on rough seas. However, some people—especially children—suffer sickness from the effect of motion on a boat, in a car or in a plane. The larger the boat, plane or car, the less is the likelihood of sickness; travel by train rarely causes sickness.

Nearly all children grow out of the tendency to have travel sickness, but many adults remain 'bad sailors'.

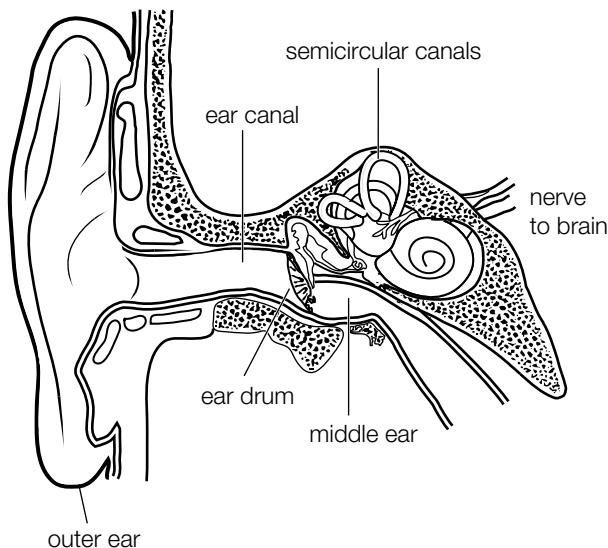
What are the symptoms?

Nausea, vomiting, dizziness, weakness and lethargy are the main symptoms. Early signs are pallor and drowsiness, and sudden silence from an active, talkative child.

What causes it?

The problem arises in the semicircular canals of the inner ear. They are set deep in the thick skull bone and are the body's balance mechanism.

They are affected by the movement and vibration of travel. Some people have sensitive inner ear canals and are prone to sickness, especially on certain types of journeys (e.g. winding roads through hills) and in certain vehicles.



What is the treatment?

1. Keep calm and relaxed before and during travel.
With children, avoid excitement and apprehension about the travelling. Encourage activities such as looking at distant objects; discourage activities such as reading and games that require close visual concentration.
2. Lie down, if possible, because this rests the inner ear canals and reduces the urge to vomit. If travelling by car, stop regularly for breaks. Affected passengers should use the front seat if possible.
3. Do not have a large meal a few hours before the journey or during it; avoid milk and fried or greasy foods.
Do not travel with an empty stomach: have a light, simple meal about an hour before and do not drink too much. Glucose drinks such as lemonade are suitable, as are glucose sweets and biscuits while travelling.

Medication

Many medicines are available for travel sickness either as oral preparations or skin patches.

Tablets

These are good for mild travel sickness. It is desirable to take oral medication for travel sickness 60 minutes before the trip. During a long trip this can be repeated 3 to 4 times a day to prevent the symptoms.

Some medicines such as antihistamines make you drowsy, so take care: this sedative effect may be good for children or for those travelling long distances by plane.

Examples of medication are Avomine and Kwells.

Ginger

Some people find that ginger helps, so it is worth drinking ginger beer or ginger ale before and during travel.

Skin patches

Scopolamine adhesive patches are the most widely used medication for long-distance travel, especially sea travel. One patch should be applied to dry, unbroken, hairless skin behind the ear 5 to 6 hours before travel. It should be left on for 3 days but removed immediately the trip is over.

Wash the hands thoroughly after applying and removing the patch—be careful not to touch your eyes with your fingers after removing it.

Tremor: essential tremor

What is essential tremor?

It is an involuntary tremor that mainly affects the arms, hands and head and possibly the voice and legs. It can come on at any age.

It is also called juvenile tremor (if it comes on in children), senile tremor (if it comes on in the elderly), benign tremor (because it is not serious) and familial tremor (because it tends to run in families).

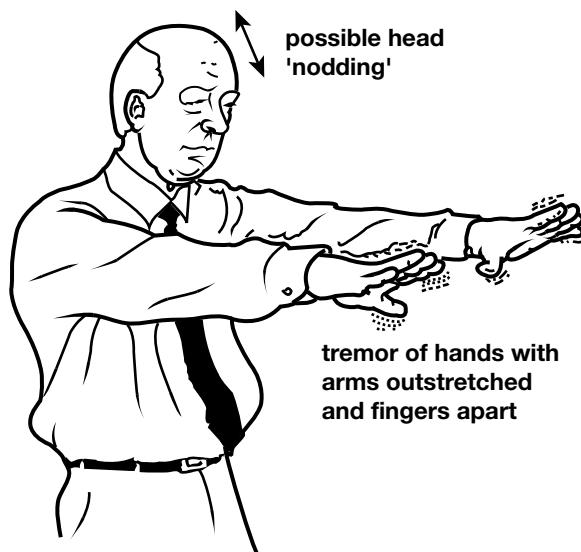
The term **essential** refers to no other disease causing a tremor.

Is it similar to Parkinson's disease?

Essential tremor often gets confused with Parkinson's, but it is different in that it is most marked when the arms are held out, while the tremor of Parkinson's is most marked with the hands resting and tends to disappear when the hands are used to do things. Walking is normal with essential tremor but abnormal with Parkinson's.

What are the symptoms of essential tremor?

- A slight tremor begins in one hand and then spreads to the other.
- The tremor may also affect the head, chin, tongue and only rarely the legs.
- The head tremor has a 'yes–yes' nodding action but can also have a 'no–no' shaking action. It can be stopped by supporting the head.
- It interferes with writing and handling cups of tea, spoons and other objects.
- A shaky, quivery voice if the vocal cords are affected.
- Anxiety, stress, lack of sleep and caffeinated drinks makes the tremor worse.
- Alcohol tends to make it better.
- The tremor stops during sleep.
- Some cases are so mild that it is not diagnosed while in others it can be quite severe.



Symptoms of essential tremor

Who gets essential tremor?

It is a relatively common problem (affects about 4 per 1000) and has a tendency to run in families. It can come on at any age, although it usually comes on in early adulthood, even in adolescence. The incidence increases with age.

What is the cause?

The cause is not exactly known, but certain chemicals that transmit nerve impulses are thought to be present in smaller quantities than normal.

Does it need special investigation?

Special expensive investigations are not necessary and are not likely to show up any abnormality. Essential tremor can usually be diagnosed upon observation.

What are the risks?

Essential tremor is not a serious illness and most people cope normally throughout life without any disability, even if it comes on in childhood. The condition usually worsens with increasing age. Very rarely some patients can become disabled and surgery may be needed to help them.

What is the treatment?

There is no cure. The treatment aims to suppress involuntary movements.

Explanation and reassurance

Because most patients cope with essential tremor throughout life, reassurance and education about the tremor are all that are required. Counselling regarding stress management is advisable if appropriate. Medical treatment is usually unnecessary. Caffeine intake should be reduced.

Alcohol

Although alcohol helps those with faster tremors, it is not advisable to use it as a treatment. It can aggravate the condition in some people. It should be used in moderation only.

Medication

In some patients the tremor can be socially embarrassing, especially when they are very anxious. The beta-blocking drug propranolol and anti-epileptic drugs can be used with good effect in these patients. There are also other drugs that can be effective.

Surgery

Surgery to a selected part of the brain has proven to be successful in some people afflicted with more severe tremors. Deep brain stimulation to the thalamus is a new, effective treatment.

Urticaria (hives)

What is urticaria?

Urticaria, also known as hives, is a common allergic disorder in which a red, itchy, lumpy skin rash appears ‘out of the blue’. These skin lumps, which are known as wheals, can develop anywhere on the body, including the palms and soles. The wheals, which have pale centres and red margins, can spread out and join up to form large irregular patches. They are usually about 1 to 5 cm across. These wheals can rapidly change shape and come and go over a period of minutes or hours. Urticaria can be acute in onset (in which the cause is often known and the disorder settles within 6 weeks) or chronic (where it lasts longer).

Who gets urticaria?

Urticaria can affect any person at any age. One out of every 5 people will have an attack at some stage in their lives. The allergy can be present at birth or develop slowly over many years or appear suddenly on exposure to the allergens.

What causes urticaria?

Urticaria is a type of allergy resulting from a release of a chemical called histamine. The cause of this histamine release is often unknown, but common causes are foods, drugs and infestations. Sometimes the cause is very obvious, such as when urticaria appears minutes after eating.

Checklist of possible causes

- Foods: eggs, nuts especially peanuts, shellfish, other fish, cheese, oranges, chocolate, caffeine, strawberries and others
- Infection: viral, bacterial or fungal (especially viral upper respiratory infections)
- Food colourings (e.g. tartrazine)
- Drugs: penicillin, sulfur antibiotics, aspirin, codeine, vaccines and others
- Insect bites: bees, wasps, sandflies, fleas, mosquitoes and others
- Azo dyes
- Plants: nettles, poison ivy and others
- Animals: cats, horses and others
- Cosmetics and perfumes
- Infestation: parasites
- Exposure to heat and cold
- Overexposure to sunlight

- Underlying chronic disease (e.g. lupus, lymphoma)
- Pregnancy (last trimester)

Note

Tension and stress usually make urticaria worse.

What is angio-oedema?

This is a serious form of urticaria in which the face, especially the lips and skin around the eyes, suddenly swells. It can be serious if the throat swells. You should contact your doctor immediately if this develops.

How is the cause found?

You may be asked to keep a food diary and note any associations. You may also have to undergo patch testing of your skin to find out what you may be allergic to.

What is the treatment?

- Antihistamines, usually taken by mouth, are used to relieve the rash and itching. Cortisone may be used for more severe cases. Avoid taking aspirin or other drugs not prescribed for you.
- Itching can be relieved by daubing with calamine lotion.
- Cold water compresses, such as soaking a towel in cold water, can also relieve itching. Avoid hot baths or showers during the acute phase—keep it cool!
- Decrease your activity during the acute phase. It is better not to get hot and sweaty.
- Avoid alcohol and caffeine-containing drinks, especially if there is a possibility of these being a trigger factor.
- Drink a large quantity of water—at least 2 litres on the day of the attack.

Call for urgent attention if you:

- have problems breathing
- have angio-oedema, especially swelling of tongue and throat
- are choking
- have pale and sweaty skin
- are faint and dizzy.

Varicose veins

What are varicose veins?

Varicose veins are twisted and swollen veins caused by faulty valves in the system of veins in the leg. The failure of the valves to close properly causes blood returning to the heart to pool in the veins.

How do they form?

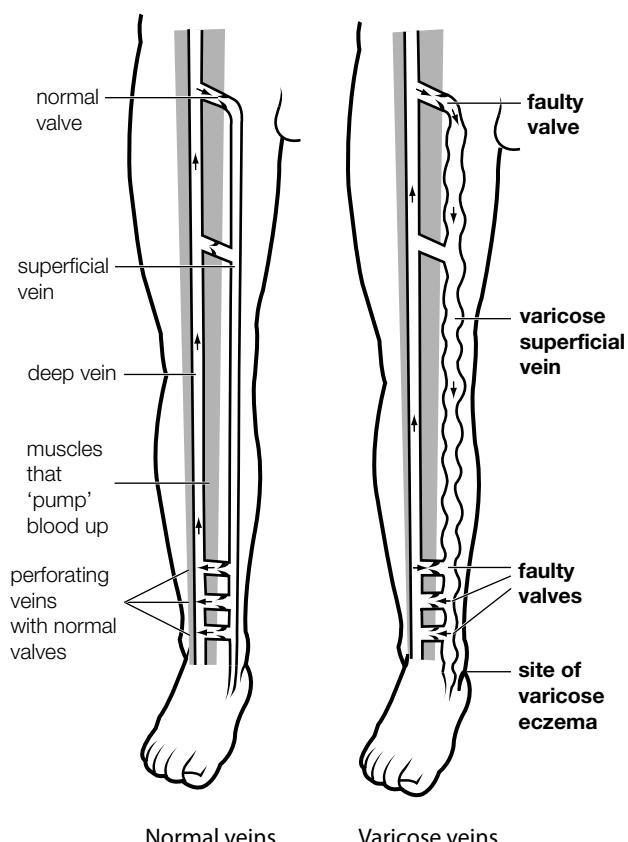
Blood is collected from the leg in a network of superficial veins (just under the skin, on the surface of muscles). These veins are connected with deep veins in the muscles by perforating veins. When the muscles of the leg contract they pump the blood up these veins, which have one-way valves to prevent blood flowing back into the superficial veins.

When the valves do not close properly the blood tends to flow into the superficial veins, causing them to swell with the 'pooled' blood.

There are two main types of faulty systems:

1. faulty valves in the groin, which cause the typical long knobbly veins along the leg
2. faulty valves in the perforating veins, which cause problems mainly around and above the ankle.

The latter problems are the more troublesome.



What are the symptoms?

The usual first sign is the appearance of prominent bluish swollen veins in your leg when you stand up. The usual site is either at the back of the calf or the inside of the leg from the ankle to the groin. At first they are not painful, but as the veins get larger they may become tender to touch and the skin above them or at the ankle may begin to itch.

With severe varicose veins the whole leg may ache and the skin, especially at the ankle, may become brownish. This discoloured skin is called varicose eczema.

What are the risks?

Varicose veins are usually annoying and unsightly rather than disabling. Serious complications include the development of an ulcer in the skin (usually after an accident), inflammation of the vein or a clot in the vein.

Sometimes a knock or cut over a vein can cause severe bleeding. If this happens, put your leg up above your body and wrap a firm bandage around the bleeding vein.

What is the treatment?

Self-help

- Keep off your feet as much as possible.
- Whenever possible, sit with your legs up on a footstool.
- Buy or get a prescription for support tights or stockings and put them on before you get out of bed every day.
- Do not scratch itchy skin over your varicose eczema.
- See your doctor if you develop eczema or an ulcer.

Surgery

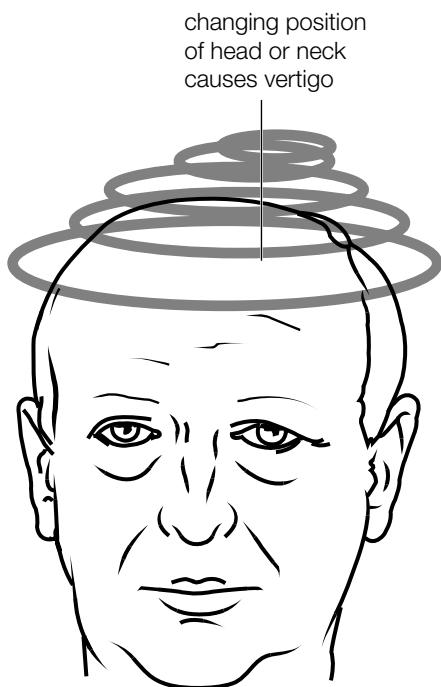
The most satisfactory answer to the problem of varicose veins is through surgery. The operation generally has good results, as the veins with the faulty valves are tied off or stripped away. It is possible to operate without leaving large scars.

After surgery varicose veins tend to come back, usually in a different place, in about 10% of treated patients.

Vertigo: benign positional vertigo

What is benign positional vertigo (BPV)?

BPV or positional vertigo is a spinning sensation of the head (vertigo) brought on by a certain position of the head, usually sudden changes of position. The word 'benign' means that it is not a serious condition and is likely to eventually get better.



What is the cause of BPV?

In most people the cause is unknown, but it can follow accidents causing neck or head injuries in some people. There are two theories to explain BPV:

1. A problem exists in the neck, usually a 'kink' in some of the swivel joints of the neck. The neck is connected to the balance centre by special nervous pathways.
2. There are tiny pieces of floating debris (possibly calcium carbonate crystals) in the balance centre of the inner ear (the labyrinth). These little bits of sediment somehow upset the balance centre when disturbed.

What are the symptoms?

- A brief attack of severe dizziness (vertigo), usually for about 10 to 30 seconds, that comes on a few seconds after a certain head movement

- Quickly subsiding dizziness
- Nausea

The head movements that provoke an attack can be:

- tilting the head backwards
- changing from a lying to a sitting position
- lying on one ear or the other
- turning the head to the side with the neck injury.

Who gets BPV?

Although it can occur at all ages, the elderly are affected most. It is the most common cause of vertigo in the elderly. Women are twice as likely as men to get it. BPV is a surprisingly common problem.

How long do the bouts of BPV last?

Each attack usually lasts less than 30 seconds but can last 60 seconds or so. The attacks tend to come in bursts but usually settle within a few weeks and most people are able to return to work within a week. The bouts tend to come back after months or years, but some people only ever have one attack.

What are the effects of BPV?

There are usually no ill effects in the long run. Unlike some other causes of severe dizziness, there is usually no vomiting, tinnitus (ringing in the ears) or deafness. The affected person has to be careful with driving.

What is the treatment?

There is no special treatment. Drugs are not effective at preventing the attacks. It is basically a matter of allowing the bouts to run their course, but there are some things that may help:

- Avoid head positions that provoke the attack.
- Do special neck exercises.
- Obtain mobilisation treatment to the neck by a qualified therapist.

Sometimes it may be necessary to be referred to a specialist to make sure it is just BPV and not a problem with the circulation to the brain.

Special exercises, either the Epley manoeuvre or the Brandt & Daroff exercises, can dislodge the debris in the labyrinth and restore balance.

Vertigo: exercises for benign positional vertigo

This set of exercises, called the Brandt & Daroff exercises, is used to treat the disturbing problem of benign positional vertigo. They are specifically designed to treat those cases in which the cause is considered to be clumps of debris (like fine sediment) collecting in one of the canals of the inner ear. The exercises disperse this debris away from the delicate balance membrane.

Rules

- Perform 3 times daily (if possible).
- Take about 10 minutes each time.
- Usually do 5 or more times to each side.
- They are beneficial only if dizziness is reproduced.
- Take antisickness tablets if nausea is a problem.

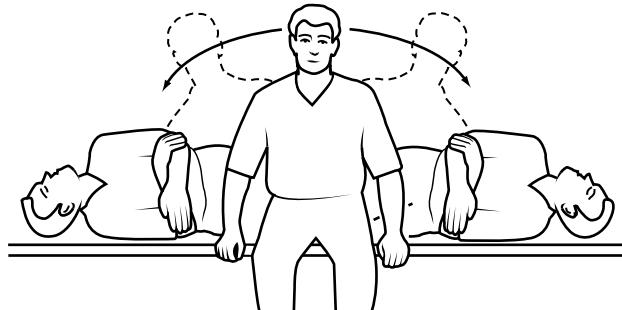
Method

1. Sit on the edge of bed; turn your head slightly to the left side (about 45°). Lie down quickly on the right side (ensure the back of the head rests on the bed). Wait for either 20 to 30 seconds or for any dizziness to settle.
2. Sit up straight. Wait for 20 to 30 seconds or for any dizziness to settle.

3. Repeat on the other side: turn the head slightly to the right side before lying down quickly on your left side.

Note:

- It doesn't matter on which side you lie down first.
- Turn your head away from the side on which you lie down.
- It is important to reproduce dizziness with the exercises.
- If the exercises are done regularly, the symptoms should settle over a period of several days but this may vary from 3 to 4 days to weeks.



Brandt & Daroff exercises for benign positional vertigo

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